DOCUMENT RESUME

ED 033 859 SE 007 615

AUTHOR	Borch-Jacobsen, Niels, Ed.
TITLE	Educational Research European Survey 1968, Volume I, Denmark, Norway, Sweden, United Kingdom.
INSTITUTION	Documentation Centre for Education in Europe, Strasbourg.
Pub Date	69
Note	159p.
EDRS Price	EDRS Price MF-$0.75 HC-$8.05
Descriptors	*Educational Research, *International Education, National Surveys, *Program Descriptions, *Research Projects
Identifiers	Denmark, Norway, Sweden, United Kingdom

Abstract

A survey collating information on educational research in member states was carried out by questionnaire; this volume contains the replies from Denmark, Norway, Sweden and the United Kingdom. The report from each country is divided into two parts: (1) Governmental Activities, and (2) Activities of Educational Research Institutes. The sections on governmental activities describe the work and financing of agencies concerned with educational research, and means used for coordinating and disseminating information. The second section gives details of the history, organization and staffing, and program of each educational research institute surveyed. Major research projects completed or in progress between 1966 and 1968 are described, usually by giving the title of the project, name of researcher, starting date and date of completion, purpose, procedure and methods, and results, conclusions and implications where appropriate. Research described is related to all levels of education from elementary through college and adult education, and to many different subject areas. In many cases published reports of the studies are listed. (EB)

ED033859

COUNCIL OF EUROPE

EDUCATIONAL RESEARCH

EUROPEAN SURVEY 1968

Volume I

DENMARK
NORWAY
SWEDEN
UNITED KINGDOM

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Volume I

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DOCUMENTATION CENTRE FOR EDUCATION IN EUROPE

Editor :
Director of Education
and of Cultural and Scientific Affairs
Council of Europe
STRASBOURG
1969

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INTRODUCTION

The Fourth Conference of European Ministers of Education, which was held from 14th to 16th April 1964 in London, passed a resolution that asked the Secretariat of the Council of Europe to collate and distribute regular information on educational research in member States

Following up this resolution, the Secretariat now presents the first European Survey on Educational Research for information to the Sixth Conference of European Ministers of Education, which takes place from 20th to 22nd May 1969 in Versailles

The Survey was carried out on the basis of a questionnaire drafted by the Secretariat and revised, firstly by the group on educational documentation in December 1967, and secondly by an ad hoc group of experts on educational research in May 1968 Replies were received from 17 member States of the Council for Cultural Co-operation and from Finland The Survey is presented in three volumes, the first containing replies from :

Denmark, Norway, Sweden and the United Kingdom ;

the second, replies from :

Belgium, Spain, France, Italy, Luxembourg, the Holy See and Switzerland ;

and the third volume, replies from :

Austria, Finland, the Federal Republic of Germany, Ireland, the Netherlands, Malta and Turkey

Volumes I and III are in English, Volume II in French, the replies having been printed in the language in which they were received The Secretariat followed the advice of the ad hoc Group of experts and did not undertake the translation of the replies received into the other official language In this highly technical field an adequate translation would have required either specialised staff in the Secretariat or considerable financial means to commission a translation It is hoped that, if further surveys are carried out, a solution to this problem can be found

In accordance with the questionnaire, the replies, as a rule, comprise Part I dealing with governmental activities in this field, and Part II on activities of educational research institutes, giving details of the history, organisation and programme of the institutes concerned and their major research projects reported in 1966 - 1968, and in progress at present Member Governments were asked to answer Part I of the questionnaire themselves and to send Part II to those institutes which they would select for participation in the Survey The replies to Part II, therefore, are primarily the responsibility of the individual institutes

The Secretariat, in submitting the Survey, would like to add some remarks and comments In order to achieve a certain comparability between the various contributions, it had to do a great deal of technical re-editing in a very short time Any misinterpretations that may have arisen fall under the Secretariat's responsibility and will, it is hoped, be met with indulgence

An index volume, by subject and by author, is being prepared to facilitate the use of the Survey

The Conference of European Ministers of Education, when asking for information on educational research wanted it to be limited to major projects of general, i e European, interest The replies, which vary greatly in length and even in concept, tend as a rule to be comprehensive, whether or not they include university research The selection criteria for determining what is a major project of European interest have obviously still to be defined This will be one of the tasks that the group for educational research, meeting for the first time in 1969, might wish to undertake However, without the detailed survey of what is going on in educational research in Europe, now available for the first time, these criteria could not be discussed in substance

The replies reveal discrepancies in the resources devoted to and in the objectives pursued in educational research Differences in budget, size of population and availability of researchers are not the only factors giving rise to such discrepancies If educational innovation is becoming more and more dependent on educational research, then there is obviously a growing need for international co-operation between Governments, groups of educational researchers and national research institutes to ensure an evenly progressing development of European education in the future This is another task to which the group for educational research might usefully devote itself

Strasbourg
February 1969

Niels BORCH-JACOBSEN
Director of Education
and of Cultural and Scientific Affairs

DENMARK

PART I GOVERNMENTAL ACTIVITIES

I. AGENCIES

It has been the policy of the Danish Government to set up specialised institutions for educational research in the various fields

(1) The **Danish Institute for Educational Research** was established according to an Act of Parliament of 11th June 1954 with the object of stimulating all educational activities in the country

The institute is directly responsible to the Ministry of Education and maintains close contacts with all fields of education.

The institute carries out research studies related to education and based upon experimental activities in schools and other sources of empirical knowledge. Investigations of direct practical applicability to educational problems, as well as more theoretical investigations, are carried out.

The institute also assists in the planning and co-ordination of educational experiments outside the confines of the institute, and in the analysis of findings derived from them.

The Council of the institute comprises members representing teachers' organisations, societies and institutions active within education.

(2) In connection with several of the departments and directorates of the Ministry **permanent boards and committees** have been set up and charged with responsibility for carrying out research activities and taking the initiative in innovations within different educational fields. Such activities may, however, also be carried out by **ad hoc committees** appointed by the Ministry.

(3) Within the field of **primary and lower secondary education** an experimental centre has been established with the objective of co-ordinating experiences in teaching and disseminating them among the different schools. To create the necessary conditions for such co-ordination, an experimental school, comprising classes of pupils from the 8th, 9th and 10th forms of the public school from all parts of the country, has been established. One of the aims of the school is to elucidate some of the problems attached to instruction of pupils in the upper classes of the public school system. The work and the activities of the school are so organised that they may correspond to the developments taking place within society and can be easily adapted to the results of present-day pedagogical research.

The Committee for School Experimentation in the public primary and lower secondary schools studies the problem areas connected with experimental teaching in the municipal schools and in private and public lower secondary schools

(4) As regards education at the **upper secondary school level** a working group has been set up with a view to initiate educational experimentation This group has as its objective to work out suggestions for an experimental centre covering pedagogical, administrative and building programmes.

At the local level certain research activities are taking place in connection with the Consultative Committee concerning the Upper Secondary School Examination and the Upper Preparatory Examination. The Ministry's Directorate has finally initiated a number of research activities concerned with teaching and examinations with a view to ascertaining the importance and value of audio-visual teaching aids

(5) The Directorate for Youth and Adult Education has, through the provisions of Acts concerning Leisure-time Instruction (*Fritidsundervisning*) and Continuation Schools (*Efterskoler*) been provided with some possibilities for stimulating regional **experimental instruction of adults.**

(6) In connection with the Directorate of Vocational Education a special Division has been established with a view to initiate and develop **programmed instruction** and to carry out research activities within computerised instruction. (See also V)

(7) The Division for Economics and Statistics of the Ministry of Education has gradually built up a system of individualised educational statistics which furnishes detailed information concerning the number and individual classification of pupils/ students and teachers/ professors at the main educational institutions in the country The Division is now annually working out 4 - 5 years' estimates of the number of pupils/ students and teachers/ professors at educational institutions on the basis of current statistical material and census figures. In certain cases estimates for longer periods are carried out

More detailed investigations on the basis of personal interviews etc. have been referred to research institutions such as the Institute for Social Research and the Institute for Organisation and Labour Research under the College of Commerce in Copenhagen.

II. FINANCE

Apart from the research activities taking place within the *"Folkeskole"* at the local level, all educational research activities are supported solely by Government grants through the State Budget. Expenditure for local research activities is financed partly by the local authority and partly by the State

III. CO-ORDINATION

The Administrative Board, as well as the Board of Representatives of the **Danish Institute for Educational Research**, are entrusted with the responsibility of co-ordinating all educational research activities.

IV. INFORMATION

The Danish Institute for Educational Research and the State Library of Pedagogics both publish annual reports and lists of literature including articles on research activites and provide general information on educational research matters of interest to teachers.

The latter is further responsible for keeping the regional school-centres informed concerning educational research and educational innovations and developments.

So far no central recurrent register of research activities has been established, nor is such register in progress of being established.

The Danish Institute of Educational Research being under the authority of the Ministry of Education, informs through its reports and surveys, the Ministry on current educational research activities and their results.

V. LATEST DEVELOPMENTS

During the last two years the Division for Programmed Instruction under the Directorate for Vocational Education has concentrated its activities on developing computer-assisted instruction (CAI System).

An IBM 1440 computer, situated in Sweden, is being used, while the student terminal, situated in Copenhagen, is an IBM 1050 terminal. The programming language is Coursewriter I (CWI), but at the beginning of 1969 an IBM 360 computer and the more advanced programming language CWIII are going to be used.

DENMARK

Experimental CAI courses of one week's duration, and follow-up courses, have been arranged for teachers. 101 teachers have attended, mainly teachers from vocational education establishments.

The Division has also carried out a pilot-study concerning the educational effect of CAI and other methods of instruction.

PART II ACTIVITIES OF EDUCATIONAL RESEARCH INSTITUTES

Replies were received from the following institutes :

The Danish Institute for Educational Research

The Royal College of Education

No. 1

Name of institute : ***DENMARKS PAEDAGOGISKE INSTITUT***
(The Danish Institute for Educational Research)

Address : ***101 Emdrupvej DK 2400 Copenhagen NV.***

Director : ***Erik Thomsen mag. art.***

A. Historical

1. Year of foundation : 1954
   Coming into operation : 1955

2. On whose initiative was the institute founded ?

   A private group of psychologists and educators, 1942 - 44

3. What were the reasons, developments etc., that led to its foundation ?

   An increasing need for educational research. There were neither research institutes nor professorships in education.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

   Independent institute.

2. Do you have a directing, governing or advisory board ?

   The management of the Institute is in the hands of :

   - the Director, who is the executive and scientific administrator
   - a Research Board composed of :

     the Director as chairman ,

     the Heads of the Departments of the Institute,

     members appointed by the Minister of Education, namely :
     five professors in the subjects of general education and general and applied psychology, one professor of psychiatry, and one professor of statistics, with an expert knowledge of psychological statistics, all nominated by the corresponding faculties of the Universities of Copenhagen and Århus ;

one professor of didactics and teaching methods at the Royal Danish College of Education, nominated by that College;

a representative of the School Health Service, nominated by the Board of Health;

a member of the Institute's Council of Representatives, nominated by the Council.

All appointments are for periods of four years. The Minister of Education may, upon recommendation of the Board, change its composition.

The Board is the highest authority of the Institute in scientific matters. Its duties are to examine and approve the Institute's research programme, to follow developments in educational and psychological research, and to initiate research projects.

3. What divisions, sections, units etc., exist in your institute ?

5 departments : Educational Methodology, Educational Pyschology, Tests, Educational Experiments, Statistics.

4. How far do you participate in the initial and/or further training of teachers ?

Further training of students and teachers (trainees).

5. Present size of staff :

Research staff : 17 full-time, 1 part-time.

6. Total Budget in

Danish Crowns :	1966	1,4 million
	1967	1,6 million
	1968	1,8 million

Source of finance : National Government.

7. Main fields of research activity :

See B 3.

C./D. Research projects

I. DEPARTMENT OF EDUCATIONAL METHODOLOGY

I. 1. Research on the effect of special instruction in reading on reading achievement

Researchers : Finn Rasborg and Carl Aage Larsen

Publications :

Larsen, Carl Aage : *"Om undervisning af børn med læse- og stavevanskeligheder i de første skoleår"*. (On the instruction of children experiencing difficulties in reading and spelling in the early grades). Investigations and deliberations. Copenhagen : Danmarks pædagogiske Institut (The Danish Institute for Educational Research), 1960.

Rasborg, Finn : *"Om muligheden for at konstatere en behandlingseffekt hos læseretarderede."* (On the possibility of ascertaining any effect from remedial treatment of retarded readers.) Pedagogisk Forskning, 1962, 6, 11-16. Akademisk Forlag, 1966, pp. 31-39.

Rasborg, Finn : "*Forskningsmetode og behandlingsresultat*". (Research Method and Results of Treatment.) In : Rasborg, Finn and Florander, Jesper (ed.) : Forskningsmetodologi. Pædagogisk-psykologiske Tekster, Volume 2. Copenhagen : Akademisk Forlag, 1966 p. 40-52

Rasborg, Finn : "*Personfaktorer, situationsfaktorer og behandlingsresultat. Nogle forskningsmetodologiske perspektiver.*" (Person variables, situation variables, and result of treatment. Some perspectives of research of a methodological nature.) In : the above publication, p. 53-63

Rasborg, Finn : "*AEtiologi. Simultanrelation og successionsrelation.*" (Etiology. Relationship of simultaneous and successive events.) 1962. In the above publication p. 100-115

Purpose :

The objectives of the project are : a) to throw some light on the effect of the treatment of dyslexics and the interrelationship between this effect and the research methods that are adopted ; b) to make an analysis of the etiological problems inherent in an investigation of the effect of the treatment of different etiological categories of dyslexics.

Procedure/Methods :

a) The Effect of the Treatment of Dyslexics :

The progress in reading made by groups of retarded readers in receipt of special instruction in reading has been compared with the progress made by corresponding groups of pupils who are not given special instruction. Moreover, an analysis is made of previous surveys, illustrating the effect of special instruction in reading.

b) The Etiology of Dyslexia :

An analysis is made of the research methods which have been used in a number of traditional investigations of the etiology of dyslexia with a view to setting forth recommendations for more adequate research methods.

Conclusions :

a) The Effect of the Treatment of Dyslexics :

The investigations into the effect of the treatment, which have been carried out, show that the effect is much lower than is generally assumed.

The comparative analyses of a number of traditional investigations show that when measuring the effect of the treatment as set forth in the investigation report it varies highly in degree according to the research method used.

b) The Etiology of Dyslexia :

Analyses of a number of traditional investigations prove that segregation of some quite different research methodological levels is possible, and that the more adequate research methods are being adopted in only a modest number of investigations.

I. 2. Research on Educational Working Patterns

Researcher : Finn Rasborg

Publications :

Rasborg, Finn : "*Undervisningsmetoder og arbejdsmønstre. En introduktion.*" (Educational Methods and Working Patterns. An Introduction.) Copenhagen, The Danish Institute for Educational Research, 1968.

Rasborg, Finn : *"Om tilrettelæggelse af kurser. Pensumbeskrivelse, deltagerforudsætninger, fremgangsmader."* (The Planning of Courses. Definition of the curriculum, basic qualifications required of participants, procedures.) Nordisk Forum, 1967, 3, 213-330.

Rasborg, Finn : *"Lederstyret og boldstyret arbejde."* (Leader directed and group directed work.) Unge Pædagoger, 1967, 28, 3-9

Rasborg, Finn : *"Case-metoden som pædagogisk arbejdsmønster."* (The case method as educational working pattern.) Pædagogik og fag, 1967, 3, 10-18.

Purpose :

The objective is to give descriptions of selected educational working processes.

Procedure/Methods :

The investigation comprises the observation of working patterns, a description of such patterns, and an analysis of investigations made so far to determine the effect of working patterns on the participants. In this connection plans for continued research are being considered.

Conclusions :

The investigations made so far have proved the possibility of preparing systematic and objectified descriptions of selected educational working processes.

II. DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

II 1. The role of language in cognitive development

Researchers : Thomas Nissen, Birthe Christa Jensen, Jesper Jensen.

Subprojects :

1. Analysis of development concepts, f. inst. "special talents", "skill", "intelligence", "learning processes" and so on.
2. Analysis of concepts used in language description.
3. Description of verbal behaviour in a natural context.
4. Description of cognitive functions and their developmental role.
5. Studies of the interaction between language and cognitive functions.
6. The genesis of language - empirical and rationalistic points of view.

1, 2 and 6 are theoretical studies, while the others are experimental.

Procedure/Methods :

re 3.

The language of children $2\frac{1}{2}$ - $3\frac{1}{2}$ years old is registered in "natural" everyday situations. The descriptions will incorporate the situations which precede the verbal utterances, and the consequences of the verbal utterance for the child.

re 4.

Based on observations of children's work with picture-sorting various systems are tested, according to which the concepts of the children can be classified. An attempt is made to illustrate developmental aspects.

re 5.

Children are placed in situations in which success is dependent on the presence of space-concepts. It is investigated whether the solution of problems can be promoted by urging the children to analyse the material verbally.

III. DEPARTMENT OF TESTS

III. 1. Relationship between educational level and Intelligence test scores in different population groups

Researcher : B. Prien

Published 1967 as publication no. 65 of the Institute (English summary)

Summary :

It has been demonstrated by G. Rasch that in intelligence test scores of recruits grouped by geographic area and social status, the average score increases according to the increase in educational level, and that the distribution of scores within each category grouped according to education is independent of geographic and social grouping. This, however, does not prove that it is the education as such which has affected the test scores. Investigations have shown that children's average intelligence test scores,obtained before school education is differentiated, vary according to the occupations of the fathers and also that there are corresponding variations when the children are grouped according to their subsequent education.

In our survey, the material was divided simultaneously according to parental occupation (grouped on basis of the education required for the respective occupations), and according to the varying types of education on which the children had just embarked at the beginning of their 6th year at school. Within each parental group the average intelligence test score is higher for the pupils at grammar school (stream b) than for those at modern school (stream a), with the undivided classes (c) taking up an intermediate position. In the undivided classes and in the material from a- and b-streams, considered as a whole, the average score increases with the father's educational level. If considering the a- and b-streams separately, however, such increase is clearly noticeable only in the b-stream, while appearing, if at all, as a slight tendency in the a-stream.

From the parental group at a high educational level a comparatively small proportion of the children were placed in the a-stream and these as a group were approximately at the same level of intelligence test scores as the comparatively large proportion of children from parental groups with lower education who were placed in the a-stream.

Based on these results the selection of the children for the different types of education may be considered an important factor when trying to explain the above mentioned results in intelligence tests administered to adults who have completed their education.

III. 2. Revision of the Danish standardised individual intelligence test (Binet-Simon)

The project has an advisory board (chairman B. Prien) and a work committee. Three full-time psychologists are working on the project : A. Kartholm (chairman of the work committee), S. Thyssen, V. Rabøl Hansen.

Purpose :

At first it was only intended to make a minor revision of the test and a new standardisation. Soon, however, it was decided not to lean too heavily on the principles on which the Binet-Simon tests are founded, but to consider the test under revision as a source of inspiration and a starting point for research on more satisfactory test types.

Procedure/Methods :

Following experiments with several test types and forms, work is now being carried out on a battery consisting of 7 tests. Each of these consists of problems of the same type but of different difficulty The following tests are included in the battery :

- Picture Arrangement
- Jig-saw Puzzle
- Concept Formation
- Simultaneous Capacity
- Understanding of a Text
- Problem-solving on an Imaginative Level
- Non-figural Completion

When each subtest is satisfactory we will study the inter-relations between the tests. The total result of the battery will not be given as an intelligence-quotient and presumably not as any single number, but rather as a profile or a parameter of more than one dimension. This can first be decided after the statistical analysis. For item analysis we use the item analysis model of G Rasch, who is also working on the other statistical and mathematical problems of the project.

III. 3. Investigation in elementary arithmetical functions

Researcher : B. Prien.

Summary :

The investigation is based on group tests in elementary arithmetic. Numbers of mistakes in each single problem and the relationship between them are studied, and analyses are made with the object of classifying mistakes in types.

Until now the main topic of this research has been the elementary number combinations in multiplication.

Instead of the traditional difficulty-ranking it is intended to describe the number of errors done in each combination as a function of the combined numbers, This can only be done after a classification of the combinations and of the errors (wrong answers), as different types of errors are distributed according to different principles. An objective classification of the wrong answers is, therefore, necessary. The number of errors on the items is broken down so as to give a rather simple mathematical description of the system of items according to "item difficulty". It is of importance to study how far the structure of this description varies with the tested population, and extended trials are done to fit the method of analysis to research on published data on the relative difficulty of the elementary number combinations.

It is hoped in this way to develop a terminology usable in more precise didactic research in the foundations of arithmetic skills, and work towards a technique for determining in advance the difficulty of more complex arithmetical test items.

As can be seen from the above, this project is a kind of basic research, which does not immediately lead to conclusions usable by the teacher, but perhaps the emphasis on the information which lies in the errors may point towards a more diagnostic way of teaching arithmetic.

III. 4. Investigation of the extent of English vocabulary of Danish high-school students

Researcher : B. Prien.

Summary :

This research began with experiments with different types of vocabulary tests in order to measure the extent of students' vocabulary in a foreign language. We worked with an adaptation of a test from Educational Testing Service : Words of low frequency were explained in a kind of basic English. The students had to choose the best fitting of three alternative explanations of each word. The wrong explanations were worked out with great care as to provide effective misleadings for students not knowing the word. First we had to choose words which could be expected to be known by at least some Danish students, and to adapt the misleadings to errors which could be expected to occur at the Danish high-school level. A board of experts assisted in this work and still constitute the research board on this project.

Later an alternative test form with free answers showed that even expert teachers could not always foresee the errors the students did, and a new form of the test was constructed using as alternative choices answers from the free answer form.

Comparisons of the results of using the different test forms raise the problem of a more precise description of under what circumstances a word is accepted as known by the student. At the present state the problem in this research is not only a problem of test construction but also a problem of how to describe a person's vocabulary. This may be done by a series of probabilities referring to different content areas or frequency areas. The next problem is how to integrate this data. What does knowledge of one area tell about knowledge in another area ? What is the structure of a person's vocabulary ? And what does extent and structure of vocabulary imply for general proficiency in the language considered ?

The implications for teaching cannot yet be specified, but this research work may on the way produce usable tests and results of interest for test construction.

IV. DEPARTMENT OF EDUCATIONAL EXPERIMENTS

IV. 1. Skriftligt arbejde i dansk 1. - 7. skoleår (Textbook material available on written Danish, Classes 1 up to and including 7).

Researcher : Mogens Jansen

A description is contained in Publication No 60 issued by the Institute under the title *"Skriftligt arbejde i dansk 1. - 7. skoleår".*

Purpose :

To determine the activities comprised by the teaching of the written language.

Procedure/ Methods :

All the books that are being used in the teaching of written Danish were registered according to the classroom activities provided for or envisaged in each specific book. This material was subsequently analysed. The work was handled by a number of experienced teachers attending an advanced 12-month course in theory of education and psychology at *"Danmarks Lærerhøjskole"* (The Danish College of Education) during which period they worked as in-service trainees at our institute.

Conclusions :

It was possible to demonstrate wide differences between the programmes and suggestions for the language instruction contained in the individual books comprised by the survey. Furthermore, it proved possible to use the material as basis for part of a more comprehensive project.

IV 2. Forsøg med udelte klasser og linjedeling i Horsens 1952-60. (Experiment with Non-differentiated Classes and Subsequent Detailed Differentiation in the Town of Horsens 1952-60).

Researcher : Jesper Florander

A description is contained in Publication No. 62 issued by the Institute : *"Forsøg med udelte klasser og linjedeling i Horsens 1952-60"*

Purpose :

The survey was made with a view to demonstrating :

- whether the pupils in classes where streaming is postponed until class 8 receive less extensive learning than do those in classes which, on the basis of a plus 11 test, are streamed after class 5.
- whether the classroom atmosphere is better in the unstreamed than in the streamed classes.

Procedure/Methods :

The experiment made by the school comprised experimental classes and control classes and was set up in such a manner as to permit a comparison to be made between these classes in several respects.

Conclusions :

No significant differences have been demonstrated when comparing the achievements made by the unstreamed experimental classes and the streamed control classes in the areas of Danish and Arithmetic. Corresponding groups of pupils seem to be on an equal level in these respects.

A larger proportion of the pupils from the unstreamed experimental classes stay on at school beyond the school-leaving age than is the case with the pupils from the streamed control classes, a fact which would seem to indicate that the pupils from the experimental classes are better adjusted to school when taken as a group, than are the pupils from the control classes.

IV. 3. Om brugen af meddelelsesbog og standpunktsbedømmelse i 1. - 7. skolear (Investigations into the use of Report Books and the Awarding of Marks in classes 1 - 7.)

Researchers : Jesper Florander and Anders Leerskov.

This project is described in Publication No. 63 issued by the Institute : *"Om brugen af standpunktsskalaer"* (On the use of standard scales of evaluation) and in Publication No. 68 : *"Meddelelsesbog og standpunktsbedømmelse i 1. - 7. skoleår"* (The report book and awarding of marks in classes 1 - 7)

Purpose :

The object was to investigate current practice as far as the use of report books and the awarding of marks were concerned.

Procedure/Methods :

For this survey data were collected from existing report books, and on the basis of this material a recommendation was prepared for a report book in which an effort was made to pay consideration to the different wishes expressed by the parents and the teachers, respectively. This book has been used by the schools for about 4,000 pupils.

Conclusions :

No direct conclusions have been published from this experiment, but in the final comments it is emphasised that if it is desired to award any marks during the first seven classes and if a school wants to put the awarding of marks on a sounder basis, f. i. in connection with a reorganisation of the reporting system, then it is recommended to have records made after the first few terms to show the distribution of marks by subject and by class of pupils. These records should then be commented upon and discussed at a staff meeting and be followed up by annual spot tests.

IV. 4. Enhedsskole og tilvalg i folkeskolen (Unstreamed Classes and Optional Courses in the Public School)

Researcher : Jens Bjerg

This project is described in Publication No. 66 : *"Enhedsskole og tilvalg i folkeskolen"*

Purpose :

The purpose has been to map out the experiments run by the schools at that time with a view to gaining experience in respect of a change in the educational programme to be provided by the public school for classes 8 and upwards.

Procedure/Methods :

The experiments currently run by the schools were described, and through a comparison with Swedish school projects it was possible to emphasise the great importance of working systematically in an effort to develop educational methods to be applied in the forthcoming amended programme covering the instruction from class 8 and upwards.

IV. 5. Skoleforsøg med engelskundervisning i folkeskolen (School Experiments on the Teaching of English in the Public School)

Researcher : Jesper Florander

The planning of these experiments is described in Publication No. 52 issued by the Institute : *"Skoleforsøg i engelsk 1959 - 1965 I"* (School Experiments in English 1959-1965 I).

Purpose :

The experiments were made with a view to comparing the effect of introducing English as a subject at varying levels and the results achieved from 1-hour and ½-hour lessons, respectively. Moreover, an attempt was made to describe the effectiveness of audio-visual material when introduced in the elementary classes in foreign languages.

Procedure/Methods :

The experiments comprised variation of different factors. The material is in the process of further development.

IV. 6. Undersøgelse af modersmålsundervisningen (Investigation into the teaching of Danish as a mother tongue)

Researcher : Mogens Jansen

This investigation must be seen in context with the previously mentioned project, IV. 1. The overall project, started in 1963, has been subdivided into a series of sub-projects carried out within the same framework

Purpose :

The object is to describe the procedure followed by the classroom teacher in his instruction of classes 1 - 7 in Danish as a mother tongue.

Procedure/Methods :

A description is given of the educational procedure, including i. a. registrations with subsequent analyses of the educational material used. Furthermore, observers were sent out to watch the work actually being done in the classrooms. For this part of the project forms were prepared for registration of activities in normal classes 3 - 7, followed up by an analyses of the educational material used and of the observations of classroom activities at the levels mentioned.

V. DEPARTMENT OF STATISTICS

V. 1. Brobygning og udviklingsforløb (Test chaining and development studies)

Researchers : Benny Karpatoff, Gustav Leunbach, Georg Rasch.
Started 1965, probable completion 1970.

Summary :

Development studies, e. g. of reading development in the elementary school, are complicated by the need to use tests of varying difficulty during the study to measure progress in the same ability. To surmount this difficulty, the tests in question are "chained" in such a way that results obtained with different tests are expressed according to a common scale.

This chaining is performed by a probabilistic analysis of data where tests are applied, two by two, to groups of persons in the relevant age groups. This analysis is not dependent on any assumption that the tested group is in some way representative of a population, or that its abilities are normally distributed.

V. 2. Matematisk-psykologisk tekstanalyse af prøver med mere end to svarkategorier. (Mathematico-psychological test analysis, the case of more than two response categories.)

Researchers : Lars Bostrup, Gustav Leunbach, Georg Rasch.
Started 1966, probable completion 1969.

Summary :

A method has been developed for analysing the items of a test by subdividing any given group of testees according to their numbers of correct responses (or whatever characteristic of the response is relevant).

This method is not directly applicable where responses are not classified as correct/false or some other dichotomy, but into more than two categories. Various methods are being investigated in their theoretical and computational aspects. A paper is in preparation regarding one of these.

No. 2

Name of institute : **DANMARKS LAERERHÖJSKOLE**
(The Royal College of Education)

Address : ***Emdrupvej 101, 2400 Copenhagen NV, Denmark.***

Director : ***Harald Torpe, professor, rektor.***

A. Historical

The Royal Danish College of Education dates back to 1856, at which time the further education of specially skilled teachers in primary schools was established on the initiative of the Minister for Ecclesiastical Affairs and Public Instruction. During the following 100 years an institution, which became the centre of all further education of primary school teachers, grew up. Its development towards a school of higher education was promoted through appointment of a number of professors in the years since 1958, and its status as a school of higher education was confirmed by law of February 25th, 1963. The reasons were the demand for scientific research, with special reference to the work of the Royal College, as well as the increasing need for further education of teachers.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

   Independent institution

2. Do you have a directing, governing or advisory board ?

   No.

3. What divisions, sections, units etc., exist in your institute ?

   Departments of General psychology, Developmental psychology, Education and Educational psychology, Didactics and Methodology (sections for special education and for school librarians included), Religious knowledge, Danish language and literature, English, German, French and Latin, History of the Danish School, Song and Music, Mathematics, Physics, Chemistry, Biology, Geography and Nutrition and Biochemistry.

   The main institution is placed in Copenhagen ; 7 branches are - or will be - placed in larger provincial cities. The research, however, will be centred round the main institution in Copenhagen.

4. How far do you participate in the initial and/or further training of teachers ?

   The College of Education is charged with the task of taking care of all further training of the above-mentioned teachers. Gymnastics and Woodwork are, however, placed at other special institutions.

   The activities can roughly be divided into the following :

   - One year courses (2 semester courses = 10 months)
   - Shorter courses during the school-year
   - Correspondence courses
   - Summer-holiday courses

Graduate studies organised as three-year full-time studies, but convertible - according to specified rules - to part-time studies over a longer period of time. The studies lead to the graduate examination in education. The first of these studies was started three years ago. Three types of studies are established :

The psychological-educational study.

The educational study, and

The professional-educational study, which is a combination of the study of a school-subject and the study of psychology and education, including teaching problems in the subject chosen.

5. Present size of staff :

The total staff at the College consists of 187 persons, including 26 part-time staff members, 81 persons, of the university-trained staff, are occupied with both research and teaching, while 6 are carrying out research exclusively. All these are employed full-time.

6. Total budget in

Danish Crowns :	1966/67	11,1 million
	1967/68	15,5 million
	1968/69	18,5 million

It is not possible to divide the budget between teaching activities and research, while it must be mentioned that so far the predominant portion of these appropriations go to the extensive teaching activities of the College.

The institution is operated by governmental funds.

7. Main fields of research activity :

The research activities are both professional and educational, the main fields being the transformation of results of the scientific-professional research so that they can be used in educational situations at different levels. Teachers who have passed the graduate examination are considered well-qualified for educational research.

C/D. Research Projects

I INSTITUT FOR PAEDAGOGIK OG PAEDOGOGISK PSYKOLOGI

I 1. Studies in the relation between philosophical and cultural movements and educational "philosophies" and doctrines

Researcher : Mogens Nielsen,

Starting date : November 1967.

Probable completion : Autumn 1970.

Purpose :

To provide the students at the College of Education with textbooks of high academic standard in the area of educational theory.

Procedure/Methods :

Mainly historical and analytical inquiries in the field of history of philosophy and education.

II. INSTITUT FOR DIDAKTIK OG METODIK, SPECIALPAEDAGOGIK

II. 1. The frequency of some causes of and kinds of reading disability among 11 - 13 year old children

Researcher : Svend Hesselholdt
Starting date : 1966
Probable completion : 1969

Purpose :

Comparative study concerning the frequency of some perceptual and cognitive space-direction abilities among dyslectic and normal readers at the same intelligence levels.

Procedure/ Methods :

- Group testing of 600 children in two different socio-economic districts.
- Electronic data processing of all encoded test items

It is expected that the selection of children for remedial instruction can be based on new criteria and the individualisation extended.

II. 2. "The problem of anxiety in connection with investigations concerning children's conception of war and peace."

Researcher : Trond Ålvik.

Purpose :

The purpose of the project is whether or not anxiety is provoked in children when they are questioned about their conception of "war" and "peace".

Procedure/ Methods :

The subjects (N = 59) from three grade levels in an elementary school were given a variant of Sarason's CMAS-scale (Children's Manifest Anxiety Scale), together with a number of questions concerning "war" and "peace", according to Solomon's four group pre-test-post-test design. The CMAS scores were treated with a simple 2 x 2 analysis of various design.

Conclusions :

Questioning children about matters of war and peace does not seem to provoke anxiety on the part of the subjects. (The conclusion is very tentative, partly due to the small number of subjects, partly due to the *ad hoc* nature of the instrument employed).

III. INSTITUT FOR UDVIKLINGSPSYKOLOGI

III. 1. An Analysis of Raven responses in 5th grade children

Researcher : Hans Vejleskov.
Published in : Scandinavian Journal of Psychology.

The purpose of this study has been to compare the test with other tests and make an analysis of the test itself possible.

III. 2. Experiments on children's conversion of numbers

Researcher : Hans Vejleskov.

Started March 1968.

III 3. An analysis of the syntactic structure of children's spoken language.

Researcher : Hans Vejleskov.

Started August 1967.

III. 4. Social adaptation related to schooling-in problems

Researcher : Thomas Sigsgaard.
Starting Date : November 1968.
Probable completion : Summer 1970.

Purpose :

The purpose of the project is to investigate factors in social adaptation, which are considered to be of importance for children's school-start, for instance dependence, independence, autonomy, security, agression, and anxiety.

Procedure/Methods :

The procedure will be interviews with teachers, visits to the classroom and registration of the children's behaviour; some testing.

III. 5. Adolescents in two societies : Peers, School and Family in the United States and Denmark

Researcher : V. Reimer Jensen.

A preliminary report has been delivered to U.S. Department of Health, Education and Welfare.

Purpose :

The purpose has been to replicate James Coleman's study : "The adolescent Society" and extend it to include a comparison between statements from adolescents with statements from the mothers and a comparison between adolescents from two different countries.

Conclusions :

One conclusion is that some of James Coleman's statements about the adolescent society have not been confirmed. The study has raised some important questions as to the socialisation process of the adolescents; some of these problems are elucidated in the study.

III. 6. An extension of the adolescent study to include adolescents in technical schools and commercial schools.

Researcher : V. Reimer Jensen.

IV. INSTITUT FOR DANSK SKOLEHISTORIE

IV. 1. The public rural primary school in Denmark, and the relations between this school and the rural population during the period app. 1880 - 1910.

Researcher : Gunhild Nissen

From November 1965 to about 1970 - 71.

IV 2. Danish Educational Policy app. 1870 - 1920 with special reference to the secondary school

Researcher : Vagn Skovgaard-Petersen, associate professor.

The project was started in 1967 and will probably be completed in 1970 - 71.

NOTE :

The Danish reply to Part II of the questionnaire contains also a report on the *Statens pædagogiske Forsøgcenter* (Innovative Centre for General Education, Grades 8 - 10) in Copenhagen.

This Centre was founded in 1964 on State initiative. It is placed directly under the Ministry of Education Its director is J E. Poulsen

The main objective of the Centre is to develop new ideas and methods for education in grades 8 - 10 and to disseminate innovative experience amongst teachers concerned through courses, lectures and reports Since educational research as such is not its purpose, the report on the Centre has not been included.

NORWAY

PART I GOVERNMENTAL ACTIVITIES

I. AGENCIES

At the establishment of the Norwegian Research Council for Science and the Humanities in 1949, one of the six sub-groups of the Council was especially assigned to research in psychology and education

As part of the general work of the Research Council, this sub-group initiates and supports research in those fields.

The 1954 Act of Experiments in Education provided for the establishment of the Council for Experiments in Education. The Council is an independent, consultative body reporting to the Ministry of Education Its function is to advise and inform the Ministry, and to supervise field projects carried out under the 1954 Act Its daily work is handled by a secretariat, with a staff of about 30 persons

In 1967, the Research Council for Science and the Humanities appointed an ad hoc committee for educational research, charged with the task of working out a long-term programme for the development of such research in Norway. The committee submitted its report early 1968, its recommendations being adopted by the Research Council and presented to the Ministry of Education.

While waiting for the reactions of the Ministry, the Research Council and the Council for Experiments in Education have established a joint co-ordination committee for educational research. One of its tasks is to formulate more concrete proposals for a short-term research programme within the framework of the suggested long-term development programme.

In 1964, a **Department of Planning** was set up within the Ministry of Education, one of its functions being to act as a liaison between the administration work in the Ministry and outside research It also collaborates closely with various ad hoc commissions set up to study reforms in special fields of education

The director of the Planning Department acted as the chairman of the Research Council's ad hoc committee for educational research, and he is also chairing the Co-ordination Committee.

II. FINANCE

Basic appropriations are provided through the regular state-financed university budgets. In addition, the Research Council allocates about 0,5 million N cr per year, while the state-financed 1968 budget of the Council for Experiments in Education amounts to about 3 million N cr , of which some 2 million N cr for experimental and research work.

III. CO-ORDINATION

Co-ordination is undertaken by the bodies mentioned under I, especially the Co-ordination Committee.

IV. INFORMATION

A survey of educational research was undertaken by the ad hoc committee for educational research. There is no recurrent register of research projects

Information on all projects financed by the two councils is submitted annually to Parliament through the Ministry of Education. Research reports are also made available to schools, teacher associations, etc.

V. FIELDS STIMULATED AND EXPERIMENTAL WORK

Fields especially stimulated by the Council for experiments in Education are :

- Individualised teaching
- Educational technology
- Pre-school education
- Teachers' Training Colleges : New structures
- The 9-year school in sparsely populated areas
- Post-compulsory schools : gymnasiums and vocational schools. New structures in the gymnasium, and combined teaching for the pupils in gymnasiums and vocational schools.

The report on the development of educational research emphasises particularly pre-school and beginner education, the lower secondary level and adult education. Research on evaluation, the development of major material/methods systems, and extensive studies of system behaviour are especially advocated.

Experimental work is undertaken according to the following pattern :

- **Initial stage.** This involves preliminary experimentation in a few schools where a pilot project is to be tried out, revised and tried again, under close supervision.
- **Field work stage** (verification stage). Experimentation is extended to a greater number of schools, still under close supervision.
- **Executive stage.** The experimental project is concluded. It is assessed, possibly determined as passable and desirable, and recommended to the Ministry of Education for general adoption in Norwegian education.

VI. PROPOSALS CURRENTLY UNDER CONSIDERATION

The proposals currently under consideration in the Ministry of Education include the establishment of a special research branch within the Ministry, and the provision of funds for research contracts by the Ministry, in addition to increased allocation of funds to the Research Council and the Council for Experiments in Education. The two councils, through their Co-ordination Committee, are also supposed to advise the Ministry on the question of direct research contracts.

Special trends in the work of the Council for Experiments in Education include closer collaboration with other institutions interested in educational research, long-term planning of experimental and research work, concentrating on larger projects, and contacts with other countries for co-ordination of projects.

PART II ACTIVITIES OF EDUCATIONAL RESEARCH INSTITUTES

Replies were received from the following institutes :

1. Institute for Educational Research, University of Oslo
2. Council of Experiment in Education
3. Institute for Applied Social Research
4. Department for School Experimentation and Research, City of Oslo
5. Institute of Education, University of Trondheim
6. Institute for Social Research
7. Norwegian Research Council for Science and the Humanities, Research Department

No. 1

Name of institute : *PEDAGOGISK FORSKNINGINSTITUTT, UNIVERSITETET I OSLO*
(Institute for Educational Research, University of Oslo)

Address : *Box 1092, Blindern, Oslo 3, Norway,*

Director : *Johs. Sandven, Professor of Education*

A. Historical

1. Year of foundation : 1936
   Operative : 1938

2. On whose initiative was the institute founded ?

   Founded by decision of the Norwegian *Storting* (Parliament).

3. What were the reasons, developments etc , that led to its foundation ?

   The institute was created to act as a central institution for educational research and school experimentation in Norway.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated ro or connected with a university, faculty (department) or another organisation ?

   The institute is part of the Faculty for Social Sciences, University of Oslo.

2. Do you have a directing, governing or advisory board ?

   Academic staff and student representatives form an assembly with mainly policy-making influence The assembly elects a board of which the director is the chairman Decisions are made either by the assembly, the board or the director.

3. What divisions, sections, units etc., exist in your institute ?

None.

4. How far do you participate in the initial and/or further training of teachers ?

No participation in teacher training.

Our staff, however, teaches for academic degrees in education.

5. Present size of staff :

		(Full-time)	(Part-time)
Total	36	32	4
Teaching and research		23*	-
Research		4	4
Administrative		1*	-
Clerical		4*	-

6. Total budget in Norwegian crowns :**

1966	95.000
1967	107.000
1968	125.000

These figures pertain to a Government grant via the University budget.

Individual members of staff have received grants from the Norwegian Research Council for Science and the Humanities. Figures available for 1966 give as the approximate amount for that year : N. Kr. 320.114 -

7. Main fields of research activity :

Educational psychology, schoolroom research.

C. Major research projects reported in the academic years 1966/67 and 1967/68.

C. 1. Det sosialpedagogiske prosjekt (The project in social education)

Researcher : Johs. Sandven

Amount of time : several years.

Publications :

Sandven, J. : *Oppdragelse og vekst* (Education and growth). J. W. Cappelens forlag, Oslo 1966

Essays in journals, particularly in Pedagogisk Forskning, a Scandinavian journal of educational research.

Purpose :

To study the students' development of co-reactive behaviour and security feeling, and the measurement problems involved in the study of these functions.

Procedure/Methods :

Methods were developed as part of the project.

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* One vacant position,

** The sums refer to current expenses, not salaries, housing etc.

Conclusions :

Among others : Measuring instruments of a "projectometric" type have been developed for security feeling, co-reactive behaviour and school achievement motivation. - Recommendations have been made in the referenced publications for changes in the admission system as regards the teacher training colleges.

C 2. Evalueringsprosjektet (The evaluation project)

Researcher : Johs. Sandven

Amount of time : So far, two years.

Publication : Three mimeographed reports so far.

Purpose :

To study evaluation problems in the youth school and the gymnasium.

Procedure/Methods :

"Projectometric" methods combined with other methods.

Conclusions :

Among others : School achievement motivation and security feeling are functions which partly determine the progress in the schools concerned. - Mimeographed reports are being sent to schools and school authorities. - It is expected that the conclusions will stimulate efforts in the direction of a better adaptation of the school to slow-learning children.

C 3. Avgangaresultater i 9-årig skole sett i relasjon til ulike undervisningsforhold (Final examination results in the 9-year school related to varying instructional conditions.)

Researchers : Johs. Sandven with Magne Nyborg

Amount of time : Two years.

Publications :

A summary report to appear under above-mentioned Norwegian heading, 1968. This is based upon the following mimeographed reports :

Eidet, S.E. : *Undervisningstiden i barneskolen* (Relation of examination results to number of teaching hours during the first 6 years in school). Oslo 1966.

Evenshaug, O. : *Lærerskifte og skoleresultat* (School performance in children with stable and changing teacher situation). Oslo 1966.

Hvattum, G. : *Timetallet i 9-årig skole sett i relasjon til eksamensresultatene i 9. klasse* (Examination results in the 9th grade related to the number of hours taught in the 9-year school). Oslo 1966

Karlsen, K.A. : *Kjønnsdifferenser i skolekarakterer* (Sex differences in examination marks) Oslo 1965.

Meling, T. : *Elevatferd og lærervurdering* (Relationship between teachers' marks and examination marks for boys who receive low marks for conduct). Oslo 1966.

Ostad, S. : *Barneskolekarakteren som differensieringsmiddel* (The predictive value of the 6th grade examination marks). Oslo 1965.

Syvertsen, H : *Fravær i 9-årig skole.* (Absence from school) Oslo 1965.

Tronvoll, O K : *Sosial lagdeling og skoleframgang* (Social strata and school performance) Oslo 1965.

Purpose :

To study final examination results as a function of factors like number of hours taught, size of school, stability of teaching staff, degree of absence from school, etc.

Procedure/Methods :

Pertinent information was gathered by institute staff in the archives of the respective schools.

Conclusions :

Among the results may be stressed one finding of public interests : when subjects are taught by methods and under conditions as described, there seems to be an optimal number of teaching hours.

C 4. Prosjekt over utviklingen av fargediskriminering og fargepreferenser (Project on development of colour discrimination and colour preferences)

Researcher : Åsmund Strømnes.

Amount of time : Started 1962, completed 1968.

Publications :

Main results are found in two printed and two mimeographed reports :

Strømnes, Å. : *Omgrep og fargar* (Concepts and colours). *Forskning og Danning* No. 8, Oslo 1966

Strømnes, Å : *Fargenamn og referentdiskriminering i skolealderen* (Colour names and referent discrimination in school children). Oslo, 1968.

Strømnes, Å : *Verbalsymbol for kromatiske stimuli* (Verbal symbols for chromatic stimuli). Oslo 1967. Mimeo.

Strømnes, Å : *Om bruk av urimelege fargenamn hos Oslo-barn i alderen 7 - 16 år.* (Use of unreasonable colour names in children from Oslo 7 - 16 years old). Oslo 1968. Mimeo.

Purpose .

To explore the developmental trends in connection with colour names and colour concepts.

Procedure/Methods :

A stimulus material based on Hesselgren's colour system was presented to children 7 - 16 years old. Ishihara test of colour blindness was also administered together with standard test of intelligence etc. Deductions from Taylor's theory of colour perception were tested.

Conclusions :

Clear support was obtained only for two of the hypotheses, partial support for most of the hypotheses. One hypothesis was rejected.

C 5. Begavede barn i norsk grunnskole (High IQ children in Norwegian primary school)

Researcher : Arnold Hofset

Amount of time : 1963 - 1968

Publication :

Hofset, A : *Begavede barn i norsk grunnskole.* (High IQ children in Norwegian primary school). Oslo 1968

Purpose :

To study the situation (performance, adjustment, popularity, leadership, extra-curricular activities) of high IQ children in primary school.

Procedure/Methods :

In addition to standard archives information several measuring instruments were specially developed for this project.

Conclusions :

The results confirm earlier studies. The report stresses the importance of providing more challenging tasks for such children. On the other hand results indicate good adjustment, but only moderate interest in school work.

D. Major research projects in progress

D. 1. Gymnasprosjektet. (The senior high school project)

Researcher : Johs. Sandven.

Starting date : 1966

Completion date : 1971.

First report :

Sandven, J , and Sysiharju, A.L. (Eds.) : *Veien til og gjennom gymnaset i de nordiske land.* (The road to and through the gymnasium in the Scandinavian countries). Universitetsforlaget, Oslo 1966

Purpose :

Part of an inter-Scandinavian project. The Norwegian section of this project is mainly aimed at a study of pupils' progress through senior high school in relation to personality and environment variables and earlier school history. Special attention will be paid to the development and importance of the school achievement motive.

Procedure/Methods :

This is a follow-up study starting before the students enter the senior high school. In addition to information from school archives, instruments developed in project C. 1 are employed.

D. 1. Den didaktiske prosess (The didactic process)

Researcher : Johs. Sandven.

Starting date : 1968

Completion date : 1971 or 1972

Purpose :

Part of inter-Scandinavian project The main aim of the Norwegian project is to study the relationship between teacher personality and teacher behaviour in the teaching situation

Procedure/Methods :

Methods are in the process of being developed

D 3. **Pedagogisk terapi for barn med tilpasningsvansker (Educational therapy for children with behaviour problems)**

Researcher : Eva Nordland

Started : 1966

Completion date : Not fixed

Preliminary reports :

Nordland, E : *En studie av gutter plassert ved spesialskoler for barn med tilpasningsvansker. En foreløpig rapport.* (A study of boys placed in boarding schools for maladjusted children) Mimeo Oslo 1968

Nordland, E : *Et program for pedagogisk terapi i forbindelse med et behandlingsopplegg for gutter med tilpasningsvansker* (A programme for educational therapy in connection with treatment in school for boys with behaviour problems) Mimeo Oslo 1968

Purpose :

A study of all boys in special schools for children with behaviour problems, and girls in two such schools At one such school boys are specifically taught socially acceptable habits, and steps are taken to improve their self-concept Results are related to earlier history

Procedure/Methods :

The design contains a control group and an intensively studied experimental group (one boys' school), where an action research programme is introduced The preliminary conclusions will be tried out in one or more additional institutions before more firm conclusions are drawn

D 4. **Læremiddel/lærebøker (Teaching material/textbooks)**

Researcher : Bjarne Bjørndal

Starting date : 1966

Completion date : Not fixed

Purpose :

To develop criteria and procedures for use in production of teaching material and textbooks

The introductury phase has resulted in two reports :

Bjørndal, B. : *Om lærebøker* (On textbooks) Universitetsforlaget Oslo 1967

Bjørndal, B. : *En studie i nyere amerikansk læreplantenkning* (A study in modern American curriculum theory) Mimeo Oslo 1968

The next phase is planned to comprise the construction of material-method units in science.

Procedure/Methods :

Construction and testing of material (and teaching methods) according to modern procedures.

D 5. The Achievement Motivation Project

Researchers : Rand, Per and Vislie, Lise with Edvard Befring, Torgrim Gjesme, and Roald Nygård

Starting date : 1966

Completion date : First phase 1969.

Publications to date :

Gjesme, T : *Prestasjonsmotivasjon og skoleprestasjoner.* (Achievement motivation and school performance). Mimeo Oslo 1968

Nygård, R : *Prestasjonsmotiv hos elever med ulik sosial bakgrunn. En undersøkelse blant gutter i 7. og 8. klasse.* (Achievement motivation in pupils with varying social backgrounds. An investigation of boys in 7th and 8th grade). Mimeo Oslo 1967.

Nygård, R : *Prestasjonsmotiv hos elever med ulik sosial bakgrunn. En undersøkelse blant jenter i 7. og 8. klasse.* (Ditto for girls) Mimeo Oslo 1968

Nygård, R and Rand, P : *Basic data on control and independent variables from the achievement motivation project.* Mimeo Oslo 1968.

Nygård, R and Rand, P : *Adequacy of 6 pictures for use in a measure of n Affiliation* Mimeo Oslo 1968.

Vislie, L : *Stimulus-response principles and the measurement of achievement motivation through a projective technique.* Mimeo Oslo 1968.

Purpose :

To develop measuring instruments for the study of school relevant motivation and to study relationships between measured motivation and school performance.

Procedure/Methods :

Theoretically close to McClelland, Atkinson, Heckhausen and Sarason. Instrument adaptations of or related to theirs.

No. 2

Name of institute : ***FORSØKSRADET FOR SKOLEVERKET***
(Council for experiment in education)

Address : ***Oslo - dep.***

Director : ***Lars Aase, Director of Experiment (Forsøksleder)***

A. Historical

1 Year of foundation : 1954

2 On whose initiative was the institute founded ?

On the Government's initiative.

3 What were the reasons, developments etc. , that led to its foundation ?

The future expansion of Norwegian education, and the need to employ empirical science in order to try out new school forms and educational methods. To keep education abreast of current development in society by utilising current research projects.

B. Organisation and programme

1 Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

It is an independent, consultative body which comes under the Department of Education

2 Do you have a directing, governing or advisory board ?

The Council has 9 members appointed for a period of 3 years.
The daily work is carried out by the secretariat led by the Director of Experiments.

3 What divisions, sections, units etc. , exist in your institute ?

None.

4 How far do you participate in the initial and/or further training of teachers ?

The Council does not participate in the ordinary training of teachers, but gives some special courses for teachers who are engaged in the experiments.

5 Present size of staff :

Total	32	(Full-time) 17	(Part-time) 15
Director		1	
Inspectors		2	
Consultants		8	10 (or project leaders)
Divisional administrator			1
First secretary		1	
Typists and other workers		5	4

6 Total budget in Norwegian crowns :

1966	2,3 million
1967	2,8 million
1968	3,0 million

The budget is provided by the Government.

7. Main fields of research activity :

Practical and organisational research in the compulsory and post-compulsory schools.

C. Major research projects completed in the academic years 1966/67 and 1967/68

Bibliographical reference of publications :
(In the series of publications "Experiment and reform in School")

No 12 *Forsøk med 9-arig skole. Erfaringer og perspektiver.* (Experiments with the 9-year School, Experiences and Perspectives). Oslo 1966

No 13 *Lærerutdanningen. Målsetting og fagplaner.* (Teachers' Education, Aims and Curriculum) Oslo 1967.

No 14 *9-årig skole-administrasjons- og arbeidsforhold* (The 9-year School - Administration and Working Conditions) Oslo 1968.

No 15 *Små og store ungdomsskoler.* (Large and Small Junior High Schools) Oslo 1968

D. Major research projects in progress

D. 1. "Utvidet elevradsvirksomhet" (Extended pupils' council participation)

Researcher : Jac. Wicklem Pedersen

Starting date : August 1968

Probable completion date : No date fixed.

Purpose :

To train the pupils in the running of pupils' organisations and to define the limits of pupils' participation in the running of schools.

Procedure/Methods :

This is an attempt at introducing an innovation : A teacher who has as one of his duties to train the pupils in the practical procedures of running pupils' organisations

The background is that according to regulations every gymnasium shall have a pupils' council consisting of 2 pupils from each class to discuss questions of interest to the pupils and make recommendations to the headmaster and the teachers' council (consisting of all the teachers of the school). Often the pupils need advice on the practical procedures of running an organisation. A government committee has, therefore, recommended that there shall be a "pupils' council teacher" at each gymnasium. At present this is tried out at 7 schools in order to get some experience before the innovation is introduced into all schools of this level.

D. 2. Norsk i sammenholdte klasser i ungdomsskolen (Organising undifferentiated classes in Norwegian 7. - 9. grades)

Researcher : Otto Lauritz Fuglestad, cand. philol.

Starting date : 1965.

Completion : Not determined.

Purpose :

- To construct and test materials for individual instruction in Norwegian.

- To develop suitable instructional methods to use with this material
- To measure the effect of this instruction

It is hoped that the conclusions will influence the educational practice in the upper grades of the elementary school

D. 3. Førskole-klasser og begynnerundervisning (Pre-school classes and primary education)

Researchers : Ellen Gundersen, Anne-Lise Gjerdrum
Starting date : 1967
Completion : Not exactly planned

Purpose :

Research on and experiments with organisation, methods and materials, concerning education of pre-school and primary school pupils

D. 4. Utviklingsprosjekter i grisgrendtstrøk (The 9-year school in sparsely populated areas)

Researcher : Torbjørn Grønvik, adj.
Starting date : 1966
Completion Not determined

Purpose :

The special difficulties these schools have to cope with are :

- The necessity of combining two or more classes
- The difficulties of obtaining qualified teachers.

To help solve these difficulties the Council is working on the following projects :

- further development of school broadcasting and television,
- "combined teaching" - i.e. correspondence courses which can be a supplement for the teacher,
- programmes for individualised teaching and self-instructional teaching material,
- preparatory instruction in English (from 3rd grade),
- project-work and study-techniques based on strict planning for the year,
- further development of audio-visual aids,
- exchange of teachers.

Procedure/Methods :

All projects mentioned above will undergo an initial stage, a verification stage and an executive stage.

D. 5. IMU-prosjektet 7. - 9. klasse (Individualised Mathematics Instruction)

Researcher : Øivind Westbye
Starting date : August 1968
Completion : 1971

Purpose :

To try out a Norwegian version of the IMU-project constructed in Sweden. The aims of the project are the same as in Sweden.

Procedure/Methods :

The Norwegian project has much the same procedure as the Swedish while not so much data will be collected as in Sweden.

D **6. Moderne matematikk (New mathematics in the elementary school and Gymnasium)**

Researcher : Arnfinn Johansen, cand real
Starting date : 1965
Completion : 1970

Purpose :

Research on methods and materials.

D **7. Musikk-forsøket, 1. - 9. klasse (Alternative music curricula in the elementary school, 1. - 9. grade)**

Researcher : Olav Lindal, cand paed
Starting date : August 1968
Probable completion : 1971

Purpose :

Research on methods and instrumental teaching, another way of presenting the music itself and the music-instruments to the pupils by a "Collegium Musicum".

No. 3

Name of institute : ***INSTITUTT FOR ANVENDT SOSIALVITENSKAPELIG FORSKNING***
(Institute for applied Social Research)

Address : ***Box 1100, Blindern, Oslo 3, Norway.***

Director : ***Dr. Natalie Rogoff Ramsøy***

A. Historical

1. Year of foundation :

The Institute was founded in 1966, when the first Board of Directors was appointed. It began operation in January 1968, when the Director assumed his duties.

2. On whose initiative was the institute founded ?

Initiative was taken by a government-appointed committee of social scientists and civil servants who reported to the Norwegian Parliament on the need for and feasibility of establishing such an institute.

3. What were the reasons, developments, etc., that led to its foundation ?

The purpose of the Institute is to conduct studies which serve the administrative policy-making, and planning functions of the Ministries of Government in Norway, and other public bodies. Its mandate is, therefore, broader than that of educational research institutes, but studies of the educational system are included and, indeed, do represent one of the major activities of the Institute.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

The Institute is independent of other organisations, as far as its policies and programmes are concerned. However, it is supported by a basic yearly grant from the central Government, and this part of its budget is administered by the Scientific Office of the Ministry of Education. The connection with the university is in fact close (the Institute being housed in the social science building of the University of Oslo) but informal.

2. Do you have a directing, governing or advisory board ?

The Board of Directors sets policy, approves the budget, and handles personnel matters. At the present time it consists of representatives of the social science community in Norway.

3. What divisions, sections, units etc., exist in your institute ?

Because it is still new and rather small, the Institute is not divided into sections, but it does have diverse research programmes, including one on educational research.

4. How far do you participate in the initial and/or further training of teachers ?

No participation.

5. Present size of staff :

In 1968, the first year of operation, three full-time and four half-time researchers were on the staff, as well as a larger number of part-time assistants. Of these, one full-time and two half-time researchers were working on educational research

6. Total budget in Norwegian crowns :

The total budget of the Institute in 1968 was approximately 300.000 (basic grants plus contracts) of which about one-third can be allocated to educational research.

C. Publications

1. Tore Lindbekk : *"Ecological Factors and Educational Performance in Northern Norway"*, 1968.
2. Tore Lindbekk : *"Den niårige ungdomsskole som demokratiserende faktor"*. ("The 9-year Youth School as a Democratising Factor") *Norsk Pedagogisk tidsskrift*. December 1968.
3. Natalie Rogoff Ramsøy : *"When Educational Systems change - and when they don't"* 1968.

Nos 1 and 3 will appear in 1969 in a collection of papers presented at a European conference on the sociology of education.

D. Major research projects in progress

D. 1. The development of compulsory youth schools in Norway

A study of the way in which Norway's municipalities have implemented the change-over from a 7-year to a 9-year compulsory school system : When the local school boards started to plan the change-over, how quickly did they put their plans into effect ? What kinds of teachers have they recruited ? How many of the curricular options did they offer ? How are their pupils distributed among the various course offerings etc. ? The change-over will be analysed in relation to various social, economic and demographic characteristics of the municipalities, such as their size, location, urbanisation, occupational structure, and income level.

D. 2. The effect of youth schools on the structure and mobility of the population in local areas

An intensive study of some 20 municipalities of varying location. Longitudinal studies of a number of age cohorts, including the last to attend the old 7-year schools and the first to attend the new 9-year schools, are being carried out by following up all of the individuals in these age cohorts (some 15,000 persons) long enough to ascertain whether or not they will take the baccalaureate examination (examen artium).

D. 3. Educational level, intelligence, and occupational mobility of young Norwegian males

An analysis of data collected in 1968 in the course of screening interviews of all 19-year old males when they are called up for compulsory military service. This is essentially a repeat study of a similar analysis carried out in earlier years, and the point is to examine trends in participation in post-compulsory schooling. Since data on intelligence are available, the analysis will focus on the extent to which the general increase in educational level has been associated with a more effective mobilisation of talent in Norwegian society.

No. 4

Name of institute :	***SKOLEINSPEKTØREN I OSLO, AVDELING FOR FORSØK OG FORSKNING*** ***(School Inspector, Department for School Experimentation and Research , City of Oslo.)***
Address :	***Strømsvn. 102, Postboks 6127 Etterstad. Oslo 6.***
Director :	***Oddvar Vormeland, Ph.D. Ass. superintendent.***

A. Historical

1. Year of Foundation : 1964

2. On whose initiative was the institute founded ?

   The initiative was taken by the Superintendent of Schools and approved by the School Board of Oslo.

3. What were the reasons, developments etc. that led to its foundation ?

   Promotion and management of projects for school development, experimentation and research in the schools.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

   A professionally independent department in the school administration of the City, directly co-ordinated with the general school administration.

2. Do you have a directing, governing or advisory board ?

   A council elected by - and being one of the branches of - the School Board of Oslo deals with recommendations for new projects etc. , before the School Board takes the final decision.

3. What divisions, sections, units, etc. , exist in your institute ?

   No formal divisions.

4. How far do you participate in the initial and/or further training of teachers ?

   Participation in further training of teachers only as far as special courses set up to inform and train teachers for project-relevant purposes (new curriculum contents, methods etc.) are concerned.

5. Present size of staff :

	Full-time	Part-time
Total	5	7
Research and administration	1	
Research only	2	4
Clerical	2	3

6. Budget in 1968

   in Norwegian Crowns :

   Approximately 500.000 from municipal sources only.

7. Main fields of research activity :

   - Educational organisation
   - educational methods
   - educational technology and materials.

C. Major research projects reported in the academic years 1966/67 and 1967/68

C. 1. Bender Gestalt Test som gruppeprøve for barn i 1. og 2. klasse. (The Bender Gestalt Test as a group test with young school children)

Researcher : Dr. Oddvar Vormeland

Time : Part-time over about three years.

Bibliographical reference : Scandinavian Journal of Ed. Res. No. 1. 1968, 21 - 38.

Purpose :

To obtain data from Norwegian children on BGT as a group test, correlate results with other variables, school progress etc.

Procedure/Methods :

Group testing, statistical analysis.

Conclusions :

Validity : r = 0.50, Scoring reliability = 0.92, interscorer reliability = 0.89. Test scores fairly normally distributed. The item group 'distortion' and 'integration' have the highest subtest intercorrelation. The BGT results from early 1st grade predict school achievement during the first two school years better than results from the beginning of the 2nd grade.

The project led to recommendations to school psychologists regarding school maturity testing.

C. 2. Praktisk yrkesorientering i 8. klasse (Practical vocational orientation in the 8th grade)

Researcher : Dr. Oddvar Vormeland

Time : 1 year

Bibliographical reference : Only mimeographed

Purpose :

Making experiments on different forms of practical vocational orientation in the 8th grade.

Procedure/Methods :

Setting up different situations (visits to industries, working for one week in a practical job, for instance in an industry) and collecting data from teachers, pupils and staff at the relevant working places.

Conclusions :

Different alternatives give different results according to vocational orientation, motivation etc.

The results do contain explicit as well as implicit recommendations regarding the practical ways of giving practical vocational orientation in the 8th grade.

D. Major research projects in progress

D. 1. Ny matematikk i folkeskolen, 1. - 9. klasse (New mathematics in the elementary school, 1st - 9th grade)

Researcher : Svein Egil Eidet, cand. real.

Starting date : August 1966.

Probable completion : 1970.

Purpose :

Research on methods and materials, and comparison of different traits and trends with corresponding results when practising traditional mathematics.

D. 2. Førskoleklasser, begynnerundervisning, skoleklinikker (Pre-school classes, primary education, school clinics)

Researchers : Dr. Oddvar Vormeland and Gunhild Hagesæther, cand. paed.

Start : 1965

Completion : Not determined

Purpose :

Research on organisation, methods, materials etc. concerning education of pre-school and primary school pupils.

D. 3. Organisasjon av 5-dagers skoleuke (Organisation of 5-days' school week)

Researcher : Dr. Oddvar Vormeland

Start : 1965

Completion : 1969

Purpose :

Research on ways to organise schools and curricula in 5-days instead of 6 days, as in our traditional school system.

No. 5

Name of institute : ***NORGES LAERERHØGSKOLE***
(Institute of Education, University of Trondheim)

Address : ***Norges Laererhøgskola, Trondheim***

Director : ***Professor Sigurd Nørstebø***

A. Historical

1. Year of Foundation : 1922

2. On whose initiative was the institute founded ?

The institute was founded on the initiative of the Government and the Norwegian Teacher Organisation.

3. What were the reasons, developments etc. that led to its foundation ?

To give further education to teachers, especially in rural areas in Norway.

B. Organisation and Programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department or another organisation ?

The institute is connected with the University of Trondheim.

2. Do you have a directing, governing or advisory board ?

The board (*Radet*) consists of the Director and Deputy Director of the institute, the directors of the departments, representatives of the boards of the departments and of students. Decisions are made either by the *Rad*, directors or board of the departments.

3. What divisions, sections, units etc., exist in your institute ?

The institute has a science department, a language department and a department of social sciences, and within the departments there are several sections.

4. How far do you participate in the initial and/or further training of teachers ?

The institute participates in the further training of teachers up to a lower academic degree in education (and to a higher degree in 1969).

5. Present size of staff :

20 professors and associate professors, and about 40 lecturers.

6. Total Budget in Norwegian Crowns :

1966	6.213.200
1967	7.432.600
1968	9.233.300

Predominant source of finance :

The budget is provided by the Government.

7. Main fields of research activity :

Educational psychology and history and school-room research.

C. Lists of Reports and Publications in 1966 and 1967 :

Strømnes, Martin : *Elevstudium i skolen* (Child Study in the School) 1966, 238 pp.

Strømnes, Martin : *Klasseromsforskning* (Classroom Research) 1967, 209 pp.

D. Research Projects in Progress

Strømnes, Martin :	*Oppsedingsteori* (Theories of Moval Education), now being printed, ca. 180 pp.
Ask, Fin :	The teaching of English as a foreign language. Pupil preferences for some learning activities. By means of paired comparisons and multiple judgment design, 500 pupils in grades 7, 8 and 9 were asked to give their preferences for 15 different learning activities. Their preferences are being analysed to find some answers to the question : What kind of teaching methods for what kind of pupils ?
Sletta, Olav :	A study of socio-preferential intimacy and expansiveness. A two-dimensional scale based on the main forces assumed to determine the intimacy and expansiveness of interpersonal preferences are used to classify some sociometric criteria. Two follow-up studies in grades 7 and 8 have given the preferential data.

Telhaug, Alfred Oftedal :	The content of History Syllabus (To appear in 1969)
Telhaug, Alfred Oftedal :	The Compulsoty School and the Problems of Differentiation. (To appear in 1969)
Christiansen, Haakon Odd :	The Teaching of Danish/Norwegian in Norwegian Secondary Schools 1739 - 1869.

No. 6

Name of institute : ***INSTITUTT FOR SAMFUNNSFORSKNING***
(Institute for Social Research)

Address : ***Munthesgt. 31, Oslo.***

The institute is mainly working in research fields other than education. However, the following major research project in progress should be reported.

D 1. Forsøksgymnasstudien (A study on an experimental gymnasium)

Researcher : Harriet Holter, associate professor.

Purpose :

The study aims at following up an attempt made to change completely the administrative and educational structure of a gymnasium. This gymnasium started in 1967, as a protest against the traditional Norwegian gymnasium, and has institutionalised full democratic participation in all affairs of pupils as well as teachers. The study will register the structure that develops within the school, the degrees and forms of participation, sources of conflict and frustration, academic results and work habits, relationships between teachers and pupils on the one hand, and among pupils on the other; leadership and fractions in decision-making processes etc.

Another purpose of the study is to supply the school with research results, so that these may be used by the school in the attempt to solve problems. Some of the more specific purposes of the project will thus be suggested by the school itself.

Procedure/Methods :

Tape-recordings, participant observation, interviewing, questionnaires, essays written by pupils, various official documents.

One progress report on the study has been published as a report from the school inspector in Oslo, at the request of city council officials. Another report has been delivered to the school. At a later stage, official publications will be considered. The research team believes that the experimental school is highly promising, in that it indicates new possibilities for pupils to participate actively and sensibly in running a school of this type and level.

No. 7

Name of institute : **NORWEGIAN RESEARCH COUNCIL FOR SCIENCE AND THE HUMANITIES, RESEARCH DEPARTMENT**

Address : **Akersgaten 49, Oslo 1, Norway.**

Director : **Sigmund Vangsnes, cand. oecon.**

A. Historical

1. Year of foundation : 1954

2. On whose initiative was it founded ?

   The Research Department was established by the Board of Directors of the Research Council

3. Reasons for its foundation :

   Need for statistical surveys of higher education and surveys of the demand for research workers and other qualified personnel.

B. Organisation and programme

1. Separate department organised with permanent staff of investigators and assistants.

2. The Research Department has its own Board of Management. The Board submits proposals for grants to the Directors of the Council. Within the framework of powers granted by the Council, the Board of Management decides on fields to be surveyed and on appointments and budgets, accepts commissions and decides on the priorities of current engagements.

3. There are two sections, one for study of higher education and academically qualified manpower, and another for survey of research activities, especially.

4. No participation in the training of teachers

5. Staff in 1968/69 :

	Full-time	Part-time
Total	18	4
Researchers	10	1

6. Budget in Norwegian crowns :

1966	750,000
1967	850,000
1968	930,000

   Mainly grants from the Norwegian Research Council for Science and the Humanities.

7. Main field of activity :

   The Research Department conducts current surveys of the supply and demand of manpower within the various academic professions and makes estimates on this basis. The surveys cover investigations of supply and demand for graduates, period of study, rate of success at university, etc.

The Department also makes statistical reports of the scientific staff at Norwegian universities and other institutions of higher learning. In addition, surveys are made to show Norwegian expenditures on research and development.

C. Major Research Projects reported in the academic Years 1966/67 and 1967/68 List of reports (mimeographed) published in 1967 and 1968.

C. 1. Melding nr. 1/1967 :	*Rekrutteringen av artianere og karakterer til examen artium. En undersökelse av fire artiumskull.* (Sigmund Vangsnes)
Report No. 1/1967 :	An analysis of the age, sex, geographical and social background and final marks of students enrolled for the *"artium"* examination in the years 1946, 1951, 1958 and 1963. By Sigmund Vangsnes.
C. 2. Melding nr. 2/1967 :	*Prognosemodell for post-gymnasial utdanning. Rapport om arbeidet med en modell for student- og kandidatprognoser ved NAVF's utredningsavdeling.* (Eva Birkeland)
Report No. 2/1967 :	A Model for predicting educational Enrolment and Output in the Post-secondary educational system of Norway. By Eva Birkeland.
C. 3. Melding nr. 3/1967 :	*Tilgangen på nye studenter og samlet antall studenter ved norske og utenlandske læresteder i 1966* (Tone Holter)
Report No. 3/1967 :	Enrolment and total number of Norwegian Students in Universities at Home and Abroad in 1966. By Tone Holter.
C. 4. Melding nr. 4/1967 :	*Sammenheng mellom studieresultat, artiumskarakterer og en del andre faktorer. En undersökelse av fire universitetsstudier.* (Eva Birkeland)
Report No. 4/1967 :	A Study of Relationships between University Achievements and different Factors generally associated with Students' Performance. An Analysis in four different Fields of Study. By Eva Birkeland.

Theses for the degree of Magister Artium (Published in 1967, mimeographed)

Tove Thagaard Sem :	*Kjönnsroller og studiemotivering.* On Sex Difference in the Recruitment to Institutions of Higher Educations.
C. 5. Melding nr. 1/1968 :	*Elevtilgangen til gymnaset i prosent av årskullet skoleåret 1967/1968.*
Report No. 1/1968 :	Enrolments for the upper Stage in Secondary Schools in the School Year 1967/68 related to Actual Age-group.
C. 6. Melding nr. 2/1968 :	*Kandidater som avla lærerpröven i perioden 1905/1965.* (Ragnvald Hove)
Report No. 2/1968 :	Certificated Teachers Graduated within the Period 1905 - 1965. By Ragnvald Hove.
C. 7. Melding nr. 3/1968 :	*Kandidater med lærerpröve med noen regneeksempler for perioden 1970 - 1985:* (Ragnvald Hove)
Report No. 3/1968 :	Certificated Teachers with some numerical Examples for the Period 1970 - 1985. By Ragnvald Hove.

C 8 Melding nr 4/1968 : *Folkeskolens andel av kandidater med lærerpröve. Noen regneeksempler for perioden 1975 - 1985* (Ragnvald Hove).

Report No 4/1968 : Certificated Teachers in the compulsory School System. With some numerical Examples for the Period 1975 - 1985. By Ragnald Hove.

C 9 Melding nr 5/1968 : *Behovet for tannleger fram til 1985. Noen regneeksempler.* (Ellen Bonnevie Seip)

Report No 5/1968 : Demand for Dentists up to 1985. Some Estimates. By Ellen Bonnevie Seip

C 10 Melding nr 6/1968 : *Kandidater fra enkelte samfunnsvitenskapelige studier og deres yrker* (Rolf Edvardsen)

Report No 6/1968 : University Graduates in some Social Sciences. Distribution in Occupation and Industry (Rolf Edvardsen).

C 11 Melding nr 7/1968 : *Norske studenter og kandidater ved innenlandske og utenlandske læresteder.* (Tone Holter)

Report No 7/1968 : Norwegian Students and Graduates in Universities at Home and Abroad in 1967. By Tone Holter.

Survey.

A survey of Man-Years of Research and Total Expenditures in Research Institutions in 1966.

Report edited and published in co-operation with the Agricultural Research Council of Norway and The Royal Norwegian Council for Scientific and Industrial Research, (printed in 1968).

Note :

The character and purpose of the projects are given by the titles of the reports. Each report contains a short description of methods and conclusions of the project.

Survey results are submitted to relevant authorities, institutions and persons. Several of the reports indicate implicitly measures which ought to be taken by the authorities to re-establish an appropriate balance of supply and demand for various categories of qualified manpower.

D. Major Research Projects in Progress

D. 1. Forskningsstatistikk og utredning om forskning (Research statistics and investigations about research)

This programme takes up for closer scrutiny research expenditures and conditions influencing supply and selection of research scientists and their working conditions. The project also includes designing of a mathematical model for analysis of prospective requirements for researchers/lecturers in universities on the basis of variations in student number, student/staff ratios etc.

D. 2. Behovs- og tilgangsanalyser for kvalifisert arbeidskraft. (Estimates and forecasts concerning supply of and demand for highly qualified personnel).

With the aid of EDP, files have been established, one for graduates, one for researchers and one for research institutes, all of which are to be brought up to date each autumn. As a special task, staff member Eva Birkeland designs mathematical models for the purpose of forecasting enrolment, output and drop-outs in universities and other institutions engaged in post-secondary education.

D. 3. Utdanningssosiologi (Sociology of education).

For four complete groups of secondary school graduates a follow-up study of the choice of further education and occupation is being undertaken. The pupils will also be classified according to social and geographical origin and according to results of school-examinations.

SWEDEN

PART I

GOVERNMENTAL ACTIVITIES

I. AGENCIES

Since 1962 the **National Board of Education** has had a special research planning bureau, which is responsible for the initiation and co-ordination of research institute activities of importance for schools In conjunction therewith the National Board of Education has a **consultative committee** with representatives for educational, psychological and other social science research and of teachers', parents' and labour market organisations

A similar bureau with a consultative committee has been proposed for the **Office of the Chancellor of the Universities** in the Autumn 1967 Report of the University Education Commission

The **Swedish Council for Social Science Research** has a section for psychology and educational psychology

II. FINANCE

Educational research is supported solely by **Government grants**. The research is financed by the Swedish Social Science Research Council, the Bank of Sweden Jubilee Fund and the National Board of Education through its Research Planning Bureau The two first-mentioned bodies make grants for projects proposed at the initiative of researchers and research institutes The National Board of Education's R & D projects are planned in co-ordination between the Research Planning Bureau and the various institutes and may be initiated by either party

III. CO-ORDINATION

The **Scientific Advisory Council**, which is responsible for advising the Government on questions of research policy, has recently (in the autumn of 1967) drawn up surveys of social science research One of these surveys deals with psychological and educational research. The Council may now be expected to recommend to the government various measures for the stimulation of social science research, including educational research A review has been published (in Swedish)

A **special committee** appointed by the Crown is at present working on the co-ordination and division of labour on research at the educational psychology institutes of universities and teachers' training colleges

The Social Science Research Council has as its main function the support of basic research The Council arranges occasional **conferences** for contact and co-ordination between researchers. In 1967 there were two such two-day conferences, one on psychological and one on educational research

For **co-ordination of school research** the Research Planning Bureau of the National Board of Education maintains continuous contact with researchers at the institutes of psychology and of educational psychology of the universities and teacher training colleges.

IV. INFORMATION

The Research Planning Bureau of the National Board of Education publishes every year (in Swedish) a **catalogue of current** educational research in Sweden, the data for which are collected from the various research institutes.

Another series of publications, **"Information om skolforskning"**, deals with research projects financed by the National Board of Education. There is also an English version, called **School Research Newsletters.**

The Social Science Research Council issues every year (in Swedish) a **catalogue of completed** research projects within psychology and educational psychology.

V. DISSEMINATION AND APPLICATION

The teacher training establishments, teachers' organisations and teachers' journals receive continuous information from the educational press, various publications of the National Board of Education (e g Research Planning Bureau Catalogues and newsletters) through continuation courses, conferences etc. The teachers' organisations are also represented on the National Board of Education Consultative Committee for Educational Research and Development

School research in Sweden is conducted mostly through R & D projects in which teachers participate to a large extent

NOTE ON TRENDS AND TASKS

The trend is from predominantly descriptive school research to more experimental R & D projects, which differ from previous research projects in that they result not only in reports but also in other products, and in that an R & D project may also comprise planning of production and in-service training There are as yet no routines for these concluding project elements in the sphere of schooling Special efforts are therefore being made to devise and test different implementation models for school R & D

SWEDEN

PART II ACTIVITIES OF EDUCATIONAL RESEARCH INSTITUTES

Replies were received from the following institutes :

1 Institute of Education, Göteborg University

2 Department of Educational Research, Göteborg School of Education

3 Institute of Education and Educational Psychology, Lund University

4 Department of Educational and Psychological Research, Malmö School of Education

5 Centre for Educational Development, Stockholm

6 Department of Educational and Psychological Research, Stockholm School of Education

7 Institute of Education, Stockholm University

8 Örebro project unit

9 Department of Education, Umea University

10 Institute of Education, Uppsala University

No. 1

Name of institute :	*PEDAGOGISKA INSTITUTIONEN, GÖTEBORGS UNIVERSITET* *(Institute of Education, Göteborg University)*
Address :	*Mölndalsvägen 36, Göteborg, Sweden*
Director :	*Kjell Härnqvist, Professor (of Education and Educational Psychology)*

A. Historical

1 Year of foundation : 1956

2 On whose initiative was the institute founded ?

Division of a professorship common for psychology and education ; proposed by a University Commission in 1946

3 What were the reasons, developments etc., that led to its foundation ?

Growing importance of the subject matter area.

B. Organisation and programme

1 Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

Part of the Faculty of Social Sciences of Göteborg University.

2 Do you have a directing, governing or advisory board ?

The teachers of the institute belong to a "Collegium" with mainly advising functions to the director.

3 What divisions, sections, units etc., exist in your institute ?

No formal divisions but the research is organised in project groups.

4 How far do you participate in the initial and/or further training of teachers ?

Half-term or term-course in education for prospective teachers through 1967/68. From the academic year 1968/69 on, no participation in teacher training except subject matter education for prospective teachers of education and educational psychology.

5 Present size of staff :

		Full-time	Part-time
Total	62	36	26
Researchers (incl. university educated assistants)		24	21

6. Total budget in Swedish Crowns :

	1966	-
	1967	ca. 1,3 million
(buildings excluded)	1968	ca. 1,6 million

Predominant source of finance : From various state sources

7. Main fields of research activity :

Educational psychology, educational technology, educational planning.

C. Major research projects reported in the academic years 1966/67 and 1967/68

Below are listed theses for the Fil. lic. and Fil. Dr. and selected publications by graduated researchers. Theses and other publications belonging to projects in progress are listed under D.

List of theses and other publications in 1966/67 and 1967/68.

Ahlin, L. *Nordiska undersökningar om arbetsbördan hos skolelever i åldern 15 - 20 år* (Scandinavian investigations on the amount of school work among students aged 15 - 20 years) 1968, 105 pp.

Andersson, B-E and Levin, L. *Inlärning till ljud och oljud II* (Learning under noise II) 1968, 16 pp.

Andersson, B-E and Wallin, E. *Effekter av frågeställande vid läsning av texter II.* (Effects of questioning in reading comprehension II), 1967, 47 pp.

Askling, B. *Arbetsanalys av Förskolläraryrket* (Job analysis of pre-school teachers), 1967, 139 pp. + appendix

Claesson, L-E and Svedberg, B. *Trädtestet. Differentialdiagnostiska studier* (The Tree Test. Differential diagnostic studies), 1966 108 pp. + appendix.

Dahllöf, U. *Examensfrekvens, studentkategori och lärosäte* (Examination frequencies, categories of students and university) 1968, 28 pp.

Dallöf, U. and Hastad, M. *Matematik och ingenjörer* (Mathematics and engineers) Nordisk Utredningsserie 1967 : 10, 88 pp.

Jerkedal, A. *Top management education. An evaluation study.* PA Council Report No. 50, 1967, 237 pp.

Kärrby, G. *Barns självkorrektiva reaktioner i relation till accepterande beteende och kontrollattityd hos föräldrarna* (Children's self-corrective reactions in relation to parent nurturance and control), 1966, 89 pp. + appendix

Leissner-Andersson, I. *Om hemmiljöns betydelse för barns intellektuella och sociala utveckling i förskolealdern* (Home environment and mental and social development in pre-school children), 1968, 146 pp.

Levin, L. *Observationer av elevaktiviteten under gymnastiklektioner* (Observations of pupil activities under gymnastics periods) 1968, 13 pp.

Marton, F. *Prov och evaluering inom den akademiska undervisningen* (Evaluation of university education) 1967, 71 pp. + appendix

Peterson, W. *Satsvalsmetoden vid personalbedömning* (The forced-choice technique in personnel assessment), 1967, 216 pp. + appendix

Wallin, E. *Spelling. Factorial and experimental studies.* Göteborg Studies in Educational Sciences 3, 1967, 180 pp.

Wallin, E. (editor). *Undervisning - konst eller teknik ?* (Instruction - art or technology ?) 1968, 173 pp.

D. Major research projects in progress

D. 1. Individualstatistick (Individual statistics)

Researchers : K. Härnqvist and A. Svensson

Starting date : 1961

Completion Date : Not fixed

Purpose :

Longitudinal studies of representative national samples of pupils from the age of 13 through the educational system. So far the age cohorts born in 1948 and 1953 have been studied.

Procedure :

Intelligence and achievement tests were administered at age 13. Background and school data were recorded. Additional information on education is being recorded yearly.

Selected reports :

Härnqvist, K. and Svensson, A. (1964) : *En "databank" för yrkes- och studievalsundersökningar.* (A data bank for research on educational and vocational choices) *Nordisk Psykologi,* p. 111 - 116.

Svensson, A. (1964) : *Sociala och regionala faktorers samband med över- och underprestationer i skolarbetet.* (Over- and under-achievement in school in relation to social and regional variables) *Rapporter fran Pedagogiska institutionen, Göteborgs universitet.* Stencil

Härnqvist, K. (1966) : *Social factors and educational choice. International Journal of the Educational Sciences,* p. 87 - 102.

Härnqvist, K. and Svensson, A. (1967) : *Milieu social, rendement des élèves et orientation scolaire. Bulletin de Psychologie*, p. 782 - 789.

Härnqvist, K. (1967) : *Relative changes in intelligence from 13 to 18. Reports from the Institute of Education. University of Göteborg.* Stencil.

Rovio-Johansson, A. (1968) : *Individualstatistikundersökningar 1966. Instrument, population och materialöversikt* (Individual statistics 1966: Instruments, population and data collection) *Rapporter från Pedagogiska institutionen, Göteborgs universitet.* Stencil.

D. 2. Ungdom i Goteborg (Youth in Goteborg)

Researcher : B-E Andersson

Starting date : 1963

Completion date : Not fixed

Purpose :

Comparative studies of pupils in grades 8 and 9 between the traditional and the new Swedish school system with special emphasis on personal and social adjustment.

Procedure :

Tests and questionnaires were administered to all 8th grade pupils in Göteborg in 1963 and 1965. Half of the pupils were followed up in grade 9 in 1965 and 1967.

Selected reports - Main report series

Andersson, B-E and Wallin, E. : UG-63 : *Instrument, population, genomförande* (Instruments, population and data collection) February 1965.

Andersson, B-E and Wallin, E. : UG-63 : *Begåvning, kunskaper, skolmotivation* (Ability, achievement and motivation) February 1965.

Andersson, B-E and Wallin, E. : UG-63 : *Upplevelse av skolan som miljö och institution* (The pupil's perception of school environment) February 1965.

Andersson, B-E and Wallin, E. : *Fritiden* (Leisure time activities) January 1966.

Lundgren, U. . UG-65 : *Instrument, population och genomförande, Val av utbildningsvägar i grundskolans årskurs 8.* (Instruments, population and data collection, Choice of education for grade 8). May 1967.

Andersson, B-E., Almäng, A., Alström, B., Nilsson, L. and Plank, K. : UG-65 : *Trivsel i skolan. En jämförelse mellan det gamla skolsystemet och grundskolan.* (Satisfaction in school. A comparison between the traditional and the comprehensive school system). November 1967.

Andersson, B-E., Lindberg, E. and Sjostrand, Ch. : UG-63 och 65 : *Fyra extremgruppsundersökningar om skoltrivsel och fritidsvanor* (School satisfaction and leisure time activities in four comparisons of contrasting groups) February 1968.

Andersson, B-E. and Ekholm, M. : UG-63 och 65 : *Elevernas omvärldsorientering. En jämförelse mellan det tidigare skolsystemet och grundskolan* (Orientation in society. A comparison between the traditional and the comprehensive school system). May 1968.

Theses for the Fil. lic.

Albihn, E. *Kunskaper i matematik efter ett års skolgång i olika differentieringsformer.* (Achievement in mathematics after one year in organisationally differentiated school environments) 1968.

Bengtsson, J. and Lundgren, U. *Modellstudier i utbildningsplanering och analyser av skolsystem. En jämförelse pa kunskapsprov i matematik, engelska och svenska mellan grundskolan och det traditionella skolsystemet* (Model studies in planning and analysis of school systems. A comparison of achievement in mathematics, English and Swedish between the comprehensive and the traditional school system) 1968) (Together with the KOMPASS project)

Marton, F. *Reliabilitet och skolbetyg* (Reliability of school marks) 1967

D 3. Komparativa mål- och processanalyser av skolsystem (KOMPASS) and Kursplaninriktad utveckling av metoder för processanalyser (KUMPAN)

Researcher : U. Dahllöf

Starting date : 1967

KOMPASS : Comparative analyses of goals and instructional processes in school systems

KUMPAN : Curriculum-centered development of methods for process analysis. The main parts of the projects deal with the upper secondary stage.

Analysis of objectives. Questionnaires, intelligence and achievement tests for evaluation purposes. Recorded observations of classroom procedure

Selected reports :

Dahllöf, U. *Skoldifferentiering och undervisningsforlopp. Komparativa mål- och processanalyser av skolsystem I.* (School differentiation and instructional process. Comparative analyses of objectives and processes in school systems 1) *Göteborg Studies in Educational Sciences* 2, 1967, pp. 306.

Dahllöf, U. *Fem promemorior om målanalys, laroplansrevisioner och pedagogisk forskning.* (Five memoranda on goal analysis, curriculum reform and educational research), 1967, 43 pp.

Dahllöf, U. *Målanalys vid planläggning av en akademisk utbildning* (Goal analysis in the planning of university level education), 1967, 33 pp.

Bengtsson J. and Lundgren, U. cf. D 2 *Youth in Göteborg.*

D. 4. Programmerad undervisning på universitetsstadiet (Programmed instruction at the university level)

Researcher : S. Bernmalm

Starting date : 1967

Sample programmes for various university subjects, mainly in science and medical fields, are developed and tested in comparison with conventional methods.

Published programme :

Njurclearance (Kidney clearance), 1968.

D. 5. Mål, undervisning och prov i engelska (MUP), (Objectives, instruction and evaluation in English)

Researcher : F. Marton

Starting date : 1967

Together with the English Department of Göteborg University. So far the project has been concentrated on the methods of evaluating linguistic skills before and after one year of the study of English at university level.

Reports :

Gardmark, S *Vad är MUP ?* (What is MUP ?) 1968
Marton, F *Prov och prestationer* (Tests and performance) 1968
Kjellmer, G *On active versus passive proficiency in pronunciation,* 1968
Fransson, A *Motiv för att läsa engelska* (Motives for studying English) 1968

D 6. Uncervisningsteknologi (Educational technology)

Researcher : B, Eriksson
Starting date : 1967

Purpose .

Development of a one-year course in educational technology given for the first time in 1968

Selected reports :

School Research Newsletter No 1968 : 1 (National Board of Education)

D 7. Samhällskunskap (Civics education)

Researcher : E Wallin
Starting date : 1968
Completion date 1970

Purpose :

Analysis of objectives and construction of instructional sequences for parts of the civics education in grades 7, 8 and 9

D 8. Anpassningsmekanismer i utbildingssystemet (Adjustment mechanisms in the educational system)

Researcher : J Bengtsson
Starting date : 1968

Purpose :

A study of educational choices at the secondary level in relation to various factors. The project is part of the research programme of the 1968 Educational Commission

Procedure :

A follow-up study with questionnaires administered to students having taken part in surveys done a few years ago at an earlier point of decision in the educational system

No. 2

Name of institute : *PEDAGOGISKA INSTITUTIONEN, LÄRARHÖGSKOLAN I GÖTEBORG*

(Department of Educational Research, Göteborg School of Education)

Address : *Övre Husargatan 34, 413 14 Göteborg, Sweden*

Director : *Karl-Gustaf Stukát, Professor*

A. Historical

1 Year of foundation : 1965

2 On whose initiative was the institute founded ?

The institute was founded on state initiative.

3 What were the reasons, developments etc. that led to its foundation ?

Increased demand for qualified education research in connection with teacher training

B. Organisation and programme

1 Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

The institute is part of the Göteborg School of Education. It is also connected with the University of Göteborg. The professor of the School of Education is a member of the faculty of Social Science at the University. The academic courses for university degrees in education are divided into alternative lines and one of these is arranged by and located at the Göteborg School of Education.

2 Do you have a directing, governing or advisory board ?

The institute has no directing, governing or advisory board.

3 What divisions, sections, units etc., exist in your institute ?

Sections : A training section and a research section.
These are not formally separated, however.

4 How far do you participate in the initial and/or further training of teachers ?

The Department of Educational Research is responsible for the courses of education for all categories of student teachers including elementary school teachers, secondary school teachers and special teachers for pupils with learning difficulties. To some extent the institute is engaged in the further training of the above-mentioned and other categories of teachers.

5 Present size of staff :

		Full-time	Part-time
Total	33	31	2
Teachers	17	16	1
Researchers	16	15	1

2

6. Total budget in Swedish Crowns :

1966	876.072
1967	975.131
1968	1.588.722

Predominant source of finance : The State (through the National Board of Education)

7. Main fields of research activity.

Didactic research, instruction analysis and special education.

C. Major research projects reported in the academic years 1966/67 and 1967/68.

C 1. TV-observationer av läraraktiviteter i klassrummet (TV -observations of teacher activities in the classroom)

Researchers : K-G Stukát and Ragnar Engström.

Total amount of time spent on project : 11 months

Bibliographical reference of publication : Stukát, K-G and Engström, R. *TV-observations of teacher activities in the classroom.* Pedagogisk Forskning, 1967, s 96 - 117.

Purpose :

a) to explore and seek solutions to practical and technical problems in connection with TV-recording in ordinary school situations

b) to construct and test a classification schedule for charting teacher activities in the classroom.

c) to compare taped TV-reproduction with observational data from observers in the classroom

d) to study the effects of TV-recording upon teacher and pupil behaviour.

Conclusions :

a) With the technical arrangement used, TV was found to be applicable as a research instrument for observation and analysis of teacher activities in the classroom. Some improvements have been discussed.

b) The classification schedule included following categories : instruction, pupil care, disciplinary actions, administration, other teacher functions, kinds of aids used, the teacher's position-mobility and the size of the group with which the teacher was interacting. The frequencies in the categories have been graphically described in lesson profiles. With the average lesson profile as a frame of reference the individual lesson profiles were analysed. This analysis showed that the frequencies in different categories went together in such a way that some profiles could be interpreted as lesson syndromes : lecturing, heuristic, group work and individualised instruction.

c) Some of the videotaped lessons were also observed directly by an observer sitting in the classroom. A comparison between profiles for these two modes of observation showed that there was a rather close agreement. Some data suggested that the TV-observations had made it possible to get a somewhat more modulated and less unspecified classification of the teacher's classroom behaviour.

d) The influence of the TV-recording on teachers and pupils was studied by asking teachers, by analysing teacher and pupil speech and by counting the number of times teacher and pupils looked at the cameras. The result suggested that most of the disturbing effects vanished during the two-days period of TV recording.

Our study has given glimpses of classroom events which are not such as they are expected to be from the modern curriculum point of view Individualisation is expected to be frequent and widespread. So far as we have found, it is not. In the same way the large proportion of teacher talk and small proportion of pupil talk is probably against curriculum expectations, as is also the scant use of audiovisual aids.

Dissemination of conclusions

Teachers and administrators have been informed through teacher journals and through lectures and discussions.

D. Major research projects in progress

D. 1. Didaktisk process- och produktanalys (Didactic process - and product analysis)

Researchers : K-G. Stukát, Ragnar Engström, Gunlög Bredänge, Björn Gustafsson, Anita Ingvarson and Eva Stigebrandt.

Starting date : Autumn 1966.

Purpose :

a) to map main structures in the didactic process

b) to relate process-structures to pre-requisite variables and effect variables

c) to compare process-structures in different school subjects

d) to compare process-structures in different school milieus (i.e. regular class - special class)

e) to construct and test programmes in teacher education

f) to develop and test new instruments for teacher selection

The activity in 1968

During the spring term 1968 TV-recordings have been performed in 60 classes, two days in each class. For these TV-recordings two mobile TV-equipments have been used which were moved between different schools A selection of the observed material, chosen according to the time-sampling method was videotaped. The TV-recordings have been supplemented with continuous tape-recordings.

By means of questionnaires, interviews, tests and examining of registers data concerning milieu, teacher and pupil characteristics, and concerning the instructional process and instructional effectiveness have been gathered. During the autumn term 1968 work on the gathered data started, at first coding and preparing for correlational analysis, regression analysis, factor analysis and analysis of covariance.

The continued work during 1969

Besides continued work at and presentation of the parts of the investigation concerning the main structures of the instructional process and relationships between the instructional effects and process, teacher, pupil and milieu variables, the data will be utilised for more special inquiries. A particular area of problems concerns possible relationships between teachers' and pupils' perception of and attitudes to each other, to different school environments and didactic situations, to central social value questions and human problems.

The didactic process in different school-subjects will also be specially dealt with. Special attention will be given to, among other things, the objectivity in teaching religion.

In order to illustrate the Scandinavian and international topical question "what is special about special education ?" the data from the regular classes will be supplemented with TV-recordings and testings in special classes. This data collection will be done during the spring term 1969.

D 2. GUME which stands for the Göteborg part of a large project in Stockholm, called UME, i.e. Undervisnings Metod i Engelska (Methods of teaching English)

Researchers : Lennart Levin, Torsten Lindblad, Ingvar Carlsson and Margareta Olsson

Starting date : Spring 1968

Probable completion date : June 1969, but may go on for another two years.

Purpose :

To investigate three different methods in teaching English as a foreign language with the work names Implicit and Explicit Method, the second one in two versions. The I Method is a pure direct or audio-lingual type, the E methods are the same in combination with grammar rules, one of these being given entirely in English, the other with Swedish explanations and comparisons.

Procedure :

Three separate projects are planned, one by each of the "associates", dealing with three different grammatical problems (the do-construction, some-any, passive). In each one 18 classes totalling some 450 children will be used. Teaching period about three weeks. All the teaching programmed and controlled with a kind of AA language lab. Pre-tests, re-tests, intelligence tests etc.

The experiment proper will consist of six 30-minute lessons (in each of the three projects). Nine minutes of each lesson will make up the experiment variable, i.e. grammatical explanations. Oral drills, written drills and reading practice will be the main ingredients. Both materials and test results will be very thoroughly analysed, data processed, etc. to find out where differences have occurred. The children (aged app. 13) will be divided into three intelligence groups and teaching methods and results correlated to intelligence. About half the time will be devoted to oral drills and practices of various kinds with tape recorders and earphones with microphones. We consider this to be the main part of the lessons, but not the sole part.

D. 3. Mal och metoder i 6-åringarnas skola (Objectives and methods in the school of six-year olds)

Researchers : K-G. Stukát and K-A. Sverud

Starting date : September 1968

First report : 1970/71

Purpose :

To establish objectives and prepare adequate methods and materials for training the six-year-olds within the following subjects : social-studies, language (the mother tongue), concept learning as a prerequisite for mathematics and science.

Procedure :

The above mentioned training programmes will be worked out on the basis of a strict description of the instructional objectives described in behavioural terms. They will be tested in practice by a control-experiment-design.

Probable recommendations

The results can hopefully form a basis for more systematic curricula within the above subjects and may also point out suitable materials and methods for the six-year-old children.

D 4. Sjalvinstruerande specialundervisning (Self-Instruction in Special Education)

Researchers : K-G Stukát, Ulla-Britt Bladini, Hans Olsson and Inga Österberg

Starting date : August 1967

Purpose :

Among children with low intellectual ability there is a great need for individualised working material adapted to their standard of knowledge. The purpose of the SISU-project is to construct programmed or self-instructive material for individual use in the basic subjects of Swedish and Arithmetic.

Procedure :

The members of the project have been analysing the elementary parts of Swedish and Arithmetic, and after a detailed curriculum analysis the subjects have been divided into as small parts as possible. Each "sub-part" has been expressed as a separate goal and examples of criterion tasks are given for each part. The construction of material is guided by these operationally defined goals.

Each programmed material should contain a post-test in order to check that the student has reached the goal. This could also be used as a pre-test in a diagnostic procedure. The collected post-tests that cover a part of the subject, could be used as diagnostic tests to help the teacher to decide the standard of knowledge of the students in a class. This could be an introduction to a kind of "diagnostic teaching" that concentrates on the disabilities of each student, and carefully checks the result after every educational procedure.

D 5. Konstruktion och utprovning av en metod for inlarning av ett socialt viktigt lasordforrad till traningsskolans elever. (Construction and testing of a method for teaching a social sight vocabulary to the trainable mentally retarded)

Researchers : K-G. Stukát, Risto Kääriäinen, Anna Lewerth, Gunnar Stangvik and Niels Söndergard

Starting date : September 1966

Completion date : June 1969

Purpose :

a) Construction of a method for teaching a social sight vocabulary to the trainable mentally retarded

b) Selection of prediction variables as to who will profit from this method of instruction

c) An analysis of the effects of different ways of giving response and different kinds of reinforcement

Methods :

a) A programmed teaching method, presented in a teaching machine of multiple-choice type has been constructed. Pupils are to match written words with corresponding pictures or picture with correct word. Word-teaching is preceded by a programme for teaching appropriate concept-information. Recordings of time, number of errors etc. are made.

b) The same pupils who are now working with the programmed material have earlier been given a test battery of intelligence factors. Factor analysis and regression analysis will be made with test-data and learning-data.

c) During some of the words different pupils work under conditions varying in response type and kind of reinforcement, the effects of which we intend to analyse.

Production of specialised and very detailed teaching methods of the TMR-pupils. Development of instruments for testing the specific learning abilities and learning handicaps of TMR-pupils. Adjustments of teaching arrangements accordingly.

D 6. Barn- och ungdemslitteraturforskning : arbets- områden, arbetsbegrepp och metoder (Research on literature for children and youth : terminology and methods)

Researcher : Göte Klingberg

Purpose and procedure :

The project can be seen partly as a limited task, i.e. the production of a survey of a field of research, partly as an unlimited series of investigations contributing to this research.

a) The survey (with the title above) is intended to be published in 1969. The main purpose is to co-ordinate research on literature for children and youth in different countries and with methods of different branches of science (e.g. history of education, the sciences of literature and art, psychology, sociology, reading and graphic research, analysis of educational aims and methods) and to give this field of research a terminological and methodological solidity.

b) Several contributions to this field of research have already been published (e.g. on the educational ideas in children's literature, literary and educational aspects of the motives and genres of children's literature, the pedagogical adaptation when an author writes for children), and several are in preparation (e.g. on the diffusion between countries of children's literature, individual differences in reading interests of children and youth).

Research on literature for children and youth has the obvious practical aim of giving the rising generation as good literature as possible and to contribute to literary education. Thus, this research will also change educational practice. Besides, an analysis of the aims and functioning of literary education in the Swedish compulsory school is planned, as well as production and evaluation of new methods for this type of education.

No. 3

Name of institute : ***PEDAGOGISKA INSTITUTIONEN VID LUNDS UNIVERSITET***
(Institute of Education and Educational Psychology, Lund University)

Address : ***Pedagogiska Institutionen, Kungshuset,***
223 50 Lund, Sweden

Directors : ***Bernt Larsson, bitr. professor***
Per Anders Westrin, universitetslektor samt prefekt vid Pedagogiska institutionen

SWEDEN

A. Historical

Teaching and examination in education and didactics at the university of Lund began in 1804. Examinations took place during 15 years and teaching during 20 years. The question of establishing professorial chairs in education has, from the beginning, been connected with the training of teachers. The question was solved during the 20th century with the founding of a special degree in 1907, called Master of Arts (*"filosofisk ämbetsexamen"*) requiring either a mark (*betyg*) in education or a special course in psychology and the theory and history of education. A professorship in psychology and education was founded in Lund after an Act of Parliament in 1911 and the first professor was appointed in 1912. A doubling of the professorial chairs in psychology and education soon appeared as necessary. Matters speaking in favour of this were the great load of teaching resting upon the professors, the different methods of the different parts of the subject, the increasing number of students and the ever increasing practical application of psychology as well as of education. A decision of principle concerning the division of the professorship in psychology and education was made by Parliament in 1947. The appointment to the new professorship in education and educational psychology was made at Lund in 1957.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

The institute is a department of the faculty of social sciences at the university.

2. Do you have a directing, governing or advisory board ?

The institute has an advisory board.

3. What divisions, sections, units etc., exist in your institute ?

There are three divisions in the institute, general course (*allmän linje*), course in psychology, (*psykologlinje*), course in social education (*socialpedagogisk linje*).

4. How far do you participate in the initial and/or further training of teachers ?

The institute does not participate in the training of teachers.

5. Present size of staff :

		Full-time	Part-time
Total	40	26	14
Professor		1	
Permanent lecturers		3	
Docent		1	
Non-permanent lecturers		5	
Demonstrators (*assistenter*)		5	
Assistants (*amanuenser*)		11	
Part-time teachers			14

In addition to this there is one research-assistant (*forskningsassistent*) on a grant from the Swedish Council for Social Science Research.

6. Budget :

For teaching and examination during the academic year of 1968-69 the institute has been appropriated by the national Government the staff mentioned above.

The institute has furthermore 36,000 Sw. crs. set aside for materials and 6,800 Sw. crs. for the purchase of books.

The institute has two grants from the Swedish Council for Social Science Research, one for a research-assistant, the other for research concerning educational problems in the school (10,000 Sw. crs.)

7. Main fields of research activity.

See C and D.

C. Major research projects reported in the academic years 1966/67 and 1967/68.

C. 1. Bayesstrategier och individers informationssökande (Bayes Strategies and Human Information-Seeking)

Researcher : Bernt Larsson

Total amount of time spent on project : Two years

Bibliographical reference of publication : Larsson, B (1968) : Bayes Strategies and Human Information-Seeking. Lund : CWK Gleerup.

Purpose :

The main purpose of this monograph is to test experimentally some models for individual decision making. Such experiments may be regarded as the first link in a development leading to available devices for selecting efficient decision makers.

Procedure and methods :

Models of the Bayesian decision theory have been used in two ways, firstly as starting points for creating descriptive models of individual decision making, and secondly to contrast individual behaviour with the behaviour following from the statistical models.

Conclusions :

The subjects often show a less varied behaviour than that of a statistician. In some situations, the subjects, when making decisions, pay attention to factors which are irrelevant according to the statistical models, just as they sometimes "simplify" the stiuation by ignoring factors relevant to the statistician. There prove to be significant differences between subjects in many respects. One of the descriptive models stands out as the most promising for further analysis. Here the description of individual behaviour is often as good as the description of the statistician's behaviour with the help of the statistical model.

Steps taken to disseminate the conclusions :

The monograph has been distributed to researchers on human decision processes according to a mailing list maintained by Dr. Sarah Lichtenstein, Oregon Research Institute. US.

C. 2. Studie- och yrkesvalsproblem hos elever i de praktiska (tvabok-staviga) linjerna i grundskolan (Problems concerning studying and choice of vocation among pupils in the practical courses in the compulsory school)

Researcher : Börje Lemark

Total amount of time spent on project : Two years

Bibliographical reference of publication : Report from Institute of Education, Lund University.

Purpose :

To find out what were the problems for pupils aiming at more practical vocations after leaving the compulsory school.

Procedure and methods :

65 pupils taking practical courses during the last compulsory school year (9tp, 9ha, 9ht) had to answer a questionnaire concerning their attitudes to school, to the practical vocational guidance and to different vocations. In addition two interest questionnaires were used. The knowledge of training demands for various vocations was also assessed.

Conclusions :

Most pupils belonged to the lowest social class. They had an intelligence below the average. The marks were on a level with the intelligence. They liked the last year at school best. When they chose between the courses in the compulsory school they were primarily thinking of the choice of vocation. During the last year at school about half the pupils had changed their minds in their choice of vocation. They felt they had received good assistance from the teacher, who helps pupils with their vocational choices. Most of the pupils applied for admission to a trade school. More boys than girls applied for admission. Boys and girls applied for different training courses. The vocational choices were realistic. Primarily they wanted a vocation which they liked. Income and status were of secondary importance.

Steps taken to disseminate the conclusions :

Reports are sent to newspapers, professional papers and administrators.

C. 3. Kursledare. En vuxenpedagogisk undersökning inom Folkuniversitetet (Teachers in Adult Education)

Researcher : Karl-Axel Nilsson

Total amount of time spent on project : 2 years.

Biographical reference of publication : Report from the Institute of Education, Lund University.

Purpose :

To check the following problems :

1. What kind of teacher training, teaching experience and other background factors define the population ?
2. Which teaching behaviours define the population ?
3. Which are the attitudes to and the needs of teacher training ?
4. Which of the background factors (1) are related to the behaviour variations in (2) and (3) ?

Procedure and methods

Indirect behaviour observation of 290 foreign language teachers at Folkuniversitetet, (Peoples' College), Sweden.

Conclusions :

Among the results are the following :

77 - 90 per cent of the teachers had university qualifications in the subject which they were teaching, or they were teaching their mother tongue.

30 - 40 percent had formal teacher training degrees.

50 per cent had some special training in adult education

Special training for adult education was the most important background factor for the variation when using A-V-material. Few teachers could be classified as "lecturing"- or "student participation" - teachers.

In spite of a great understanding of the social motives of adult education most teachers were "language achievement" - centered. The relationship between background factors and teaching behaviour was a complex one.

Teacher training needs were related to experience from teacher training courses.

Steps taken to disseminate the conclusions :

The study was initiated by and carried out at the Peoples' College. The results have primarily been disseminated within this organisation.

C. 4. Studie av begåvningsstrukturen hos en grupp döva ungdomar (Study of the structure of abilities within a group of deaf teenagers)

Researcher : Kerstin No[illegible]

Total amount of time spent on project : 2 years

Bibliographical reference of publication : Swedish Council for Personal Administration, Sturegatan 58, Stockholm.

Purpose :

The purpose of the project is to develop adequate psychological methods for the assessment of deaf individuals as an aid to vocational guidance.

Procedure and methods :

All pupils leaving schools for the deaf in Sweden (age 15 - 16) were tested in the years 1965 and 1967 with a battery designed to measure a very wide range of functions - logical thinking, spatial ability, perception, mechanical aptitude, motor functions, verbal, numerical and mathematical ability. With the exception of tests intended to measure verbal ability, all tests were non-verbal, administered through non-verbal instructions and adapted for group administration.

Mean differences were calculated between deaf and hearing groups and within the deaf group for sex and classes. Factor analyses were carried out for the girls' and boys' groups separately, and for the undivided group on the basis of data from tests administered a. with speed limits b. without speed limits.

Conclusions :

Compared to the hearing group the results for the deaf are - as expected - very low in all tests involving knowledge and information (verbal, numerical, mathematical). In tests of logical thinking the results are somewhat lower than in the hearing group and in spatial, mechanical and motor abilities practically equal.

A-classes are superior in all tests involving knowledge and information or depending on speed for a good result. Girls are superior to boys in all verbal tests.

Speed is a variable that seems to have considerable influence on the factor structure. Analyses from results without a speed limit give a more differentiated factor structure with clear cut numerical and verbal factors.

Factor structure of boys and girls show considerable differences, no verbal factor emerged in the girls' group, where verbal and numerical tests went together in a very stable factor, refusing to split up. For the girls there seems to be a strong bond between verbal, numerical and problem-solving tests. In the boys' group, on the other hand, spatial, numerical and problem-solving tests showed a corresponding bond.

Steps taken to disseminate the conclusions :

The report will, in the immediate future, be distributed to administrators and teachers.

Explicit or implicit recommendations :

The study is exploratory in character and further research is needed to confirm the results. One of the implications of the study seems to be that with teaching methods making more use of visual aids, problem-solving and mathematical ability might be developed to a higher level in the boys where the nucleus of intellectual capacity seems to be spatial ability.

C. 5. Juvenila diabetikers beteende samt foraldrarnas installning till barn med diabetes (The behaviour of juvenile diabetics and the attitude of parents towards children with diabetes)

Researcher : Eva Säfvenblad.

Total amount of time spent on project : Three years.

Bibliographical reference of publication : Report from Institute of Education, Lund University.

Purpose :

To find out if due to the specific circumstances during the period of growth the diabetics show behaviours or patterns of personality that in any way can be separated from those that could be seen in normal children of the same age and sex, and to get information about the problems that the mothers experienced with the children, the mothers most often carrying the major responsibility for the care of the children.

Procedure and methods :

1. Interviews with the mothers
2. Intelligence (WIT) and personality testing (Rosenzweig Picture Frustration Study) of the children.
3. Teacher ratings concerning the behaviour of the children at school
4. Sociometric investigations in each of the school classes to which the diabetics belonged.

For each diabetic child a normal child of the same age, sex and from the same school class was taken to form a matched group. The investigation was carried out in the same way for both groups. For each group N = 50 (29 girls, 21 boys).

Conclusions :

15 of the mothers of the diabetic children were considered as overprotecting the child, and 13 as accepting the child's illness. The remaining mothers could not be assigned to any of these groups. The overprotecting mother handled the child as if it was less able than

other children of the same age, restricted its freedom, but gave it more privileges than to other members of her family. The accepting mother handled the child as much as possible as other normal children of the same age, and did not give more privileges to the diabetic child than to other members of the family.

Diabetes give rise to greater variations in the bloodsugar than normal, this in turn strengthens aggressive and obstinacy reactions in the children. The attitude of the mother towards the child is another factor of crucial importance. Children, who often face restrictions, also have greater tendencies to fight for their independence.

The illness has an unfavourable effect on the occurrence of headache, ability to concentrate, sleep and especially with the girls digestive troubles and stomach aches. There is, in addition to the somatic factor, a psychological one that is of great importance for the occurrence of these symptoms.

Mother fixation, anxiety, sensitivity and depression were more often found in the diabetics than in normal children. Children of accepting mothers behaved in a way far more often consistent with normal childrens' behaviour than did the overprotected children.

The age of the child when it was taken ill, the duration of the illness or intelligence do not effect the behaviour of the diabetic children in a uniform way. Increased age leads to an improved emotional stability. Some of the children, especially the overprotected, felt anxious about the future. The mothers of these children also felt anxious about the child, not only in situations where the illness can imply risks to the child but in other situations as well.

Concerning the intelligence no difference was found between diabetic and normal children.

Steps taken to disseminate the conclusions :

Information to the Diabetic Association of Sweden. Lectures on the subject are to be held in Stockholm, to which parents and teachers of diabetic children are invited.

Explicit or implicit recommendations

The school teachers knew very little about diabetes and the effect of the illness on the children. They often misinterpreted the child's behaviour and classified some behaviour as obstinacy, when in fact it was a sign of a diabetic attack. Teachers must be properly informed about somatic illnesses and their somatic and psychological effect on the child.

C. 6. Evalueringen av ett pedagogiskt försök angaende kommunikations-färdighetsträning (Evaluation of a pedagogical experiment concerning the training of the ability for communication)

Researcher : Anders Åberg

Total amount of time spent on project : 4 years

Bibliographical reference of publication : Report from the Institute of Education, Lund University.

Purpose :

To investigate the effect of a new method of instruction in order to give the pupils a better training and ability in verbal communication, i.e. in the use of the spoken language.

Procedure and methods

The method of instruction was used on an experiment group, 100 pupils, and on a control group, 100 pupils. The effect of the method was measured by different verbal tests.

Conclusions :

The method used had a positive effect on the ability to use the spoken language after training during only one year.

Steps taken to disseminate the conclusions :

The Swedish Board of Education has been informed about the conclusions as well as the County Board of Education in Kalmar *(Länsskolnämnden i Kalmar).*

Explicit or implicit recommendations :

The method of instruction based upon the principle of more opportunities for using the spoken language, ought to be used already with beginners in the elementary school and continue throughout the remaining school years.

D. Major research projects in progress

D. 1. Några aspekter på verbal förmåga och verbal inlärning hos gravt retarderade barn (Some aspects on language ability and language training of severely retarded children)

Researcher : Gunnel Ahlström

Starting date : November 1967

Probable completion date : December 1968

Purpose :

a) To investigate if severely retarded children understand those words with which they come into daily contact

b) To increase the word comprehension of the children through training

c) To investigate the retention of learned material

d) To study the results of the investigation in relation to the active language ability of the subjects, to their intellectual level, to their social adjustment and to the ethiology of the retardation.

Procedure and methods :

90 words are selected with reference to ADL-training. The words are illustrated as "purely" as possible. These illustrations are photographed and developed on slides. A projector projects the slide into four windows. The projector automatically tells whether the answer is correct or not. Every word being shown with three distractors.

Training of the words which the subject does not know according to the inventory of the vocabulary : Each word is shown several times with an increasing number of distractors.

Control of learning : Each word being shown with three distractors,

Investigation of retention : Each word being shown with three distractors.

Nature of explicit or implicit recommendations :

The knowledge of the vocabulary of the severely retarded children will be used for instructions to the staff taking care of and educating these children. The results of this investigation will also provide information on whether or not it is worth while to concentrate on an intensive language training with severely retarded children.

D. 2. Undersökning av faktorer som påverkar elevers val av teknisk utbildningsgång, ledande till olika former av ingenjörskompetens (Investigation of factors influencing pupils' choice of technical study-courses, leading to different forms of engineering competency)

Researcher : Björn Beselin

Starting date : November 1965

Probable completion date : 1969

Purpose :

To throw light upon those factors which are important in influencing the pupils' choice, for example family background, earlier schoolmarks, interests etc.

To find out if there are differences, and if so, what kind of differences, between the groups of pupils.

To investigate the predictive power of the tests employed.

Procedure and methods :

Aptitude tests, correlation tests - 1st term resp. last term schoolmarks, questionnaires concerning socio-economic background etc., teacher rating. Some form of factor analysis.

Nature of explicit or implicit recommendations :

Aptitude tests show that pupils from a theoretically less qualified study-course are, on the average, more "gifted" than are pupils from a more qualified study-course. This will without doubt lead to a changed educational practice and has in fact already done so. Other inter-group differences will possibly lead to the same. Results concerning the importance of some influencing factors may become a basis for directing or guiding pupils into their most appropriate study-course.

D. 3. Prestation och anpassning hos läs - och skrivretarderade elever. En jämförande studie av läsklasselever och elever i läsklinik (The achievement and adjustment of children with difficulties in reading and writing)

Researcher : Åke Bjoersdorff

Starting date : September 1967

Probable completion date : 1972

Purpose :

A comparative study between special classes and clinics (reading centres) for children with weak ability in reading and writing.

Procedure and methods :

The subjects in the study have been tested with a reading and writing test, DLS, and with an intelligence test, WIT II. According to the results of these tests the subjects have then been matched. The same subjects will later be tested with another reading and writing test, and with some achievement tests.

Nature of explicit or implicit recommendations :

It is hoped that this study will give information about what educational situation is the best one for children with a weak ability in reading and writing.

D. 4. Engelskundervisningen i Sverige. En historisk undersökning av mål och metoder. (The Teaching of English in Swedish Schools. A historical investigation of Aims and Methods)

Researcher : Ingar Bratt

Starting date : November 1966

Probable completion date : May 1970

Purpose :

To see how the English language has gained ground in Swedish schools and how the methods of today have grown out of previous practices.

Procedure and methods :

Study of school regulations, English grammars and readers, theses on modern language teaching a. s. o.

D. 5. Förkunskaper : studenters prestation och lärares förväntan. (Pretesting : Students' Achievements and Teachers' Expectations. An experimental study of the differences and their educational effects.)

Researcher : Mona Eriksson

Starting date : January 1967

Probable completion date : March 1969

Purpose :

A study for guiding further practical work : How teachers can assemble information about students' knowledge in the beginning of a course and how they can use this information in their work of setting objectives, building the educational process and constructing their tests.

Procedure and methods :

Instruments : general and specific scholastic tests, rating schedules for the teachers.

Analysis of : the tests; the performance of different student groups ; the relation between students' achievements and teachers' ratings and expectations.

Nature of explicit or implicit recommendations :

As the school system in Sweden recently has undergone great changes, the university teachers will soon (next year) have to work with students with an educational background that is different from the one students have today when they come to the university. The courses and the training at the university will have to be adjusted to the new students' knowledge and it is hoped that this study will show a feasible method for the individual teacher to check his expectations of his students' knowledge (and thereby his starting point for his teaching) with the students' actual achievements in the beginning of a course.

D. 6. Skolanpassning hos elever på grundskolans högstadium (Adjustment to school of secondary-school pupils)

Researcher : Rune Flinck

Starting date : 1961

Probable completion date : 1970

Purpose :

To investigate pupils' adjustment to secondary school in two situations of differentiation of the Swedish school system.

Procedure and methods :

Data collected through attitude-scales, interviews, grades, IQ etc. Comparisons in different groups : sex, age, socio-economics, school-classes, situations of differentiation.

D. 7. Konstruktion och utprövning av ett objektivt attitydtest (Construction and testing of an objective attitude test)

Researcher : Hillevi Gellerstam

Starting date : September 1968

Probable completion date : uncertain

Purpose :

To construct and test an attitude test measuring attitudes towards different school subjects with special reference to mathematics.

Procedure and methods :

The paired comparison system.

D. 8. Barnens talspräk vid skolans borjan i relation till senare färdigheter i läsning och skrivning (The spoken language of children starting school in relation to later ability of reading and writing)

Researcher : Rose-Marie Hersvall

Starting date : May 1968

Probable completion date : June 1969

Purpose :

1) to find out whether children showing defects in their spoken language before starting school will have difficulties learning reading and writing to a greater extent than children with a better developed speech, and

2) to find out whether early speech training will have a favourable effect on the childrens' achievements in reading and writing in the first year of school.

Procedure and methods :

The project is partly a study of the relationship between the development of reading and writing abilities and certain basic psychological variables, i.e. auditory perception, tendency of reversing, word-knowledge and attitude to reading and writing. These variables are measured immediately after the school has started in the autumn 1968, and will be related to the results of reading and writing tests in the end of the first year in school.

The project also includes an experiment regarding the effect of an early speech training in school on the ability of reading and writing during the first year of school.

1. Four months before school will begin, a sample of 200 children, beginners of 1968, are tested on school-maturity and spoken language.
2. For the experiment two groups are created, matched with respect to level of spoken language, maturity-level, age, socio-economic group and class. Initial knowledge of reading and writing letters are later checked.

3. One of the matched groups is subject to individual speech correction during the first five months in school. The other group has the function of control-group.
4. When the speech correction is finished both of the matched groups are again given the test for spoken language. The immediate effect of the speech correction on the spoken language can then be studied.

At the end of the first year in school the whole sample of beginners will be tested as regards ability of reading and writing. After that the importance of the different prognostic variables mentioned above, and the effect of the speech correction on reading and writing results, can be studied.

Nature of explicit or implicit recommendations :

Extended speech training in class, analysis of word sounds and training of articulation, and for children with special difficulties individual speech correction given by a trained teacher.

D. 9. Konstruktion och utprovning ab en studiekurs i hembygdskunskap för årskurs 3. (Construction and experiment with a study course in local history for grade 3)

Researcher : Tor Hudner

Starting date : 1967

Probable completion date : 1969

Purpose :

The investigation is a part of a pedagogic development work, which aims at producing a material-and-method system at the junior level of the compulsory school. Study technique is an essential part of the study course. It is, therefore, of special interest to investigate the effect of the training of study habits.

Procedure and methods :

The effects of the study training programme are studied in experimental and control groups, consisting of about 200 pupils. Questionnaires are given to the teachers and to the parents of the pupils. The following tests are given : achievement, reading, comprehension, word meaning, picture and map analyses, study technique, intelligence and attitude scale of the Likert-type.

Nature of explicit or implicit recommendations :

The results will be applied in the systematic construction of new study materials.

D. 10. Undersökning rörande sambandet mellan bebyggelsetyp och personlighetsutveckling - höghus - resp. låghusbebyggelse i Malmö. (A study concerning the relationship between kind of housing area in which children are being brought up and the personality development of these children - multi-storey apartment-houses v. single family houses)

Researcher : Monica Höweler

Starting date : May 1964

Probable completion date : 1974

The project being a longitudinal study consists of three parts :

a) Data collection of the first part started in May 1964 and was terminated in May 1967.

b) Data collection of the second part started in 1968 and is to be terminated in 1970.

c) Data collection of the third part is to be started in 1970 and to be terminated in 1974.

Purpose :

The purpose of the project is to find out in what respects kind of residential area, high-density multi-storey houses versus single private houses, might influence the development of certain personality traits in the children being brought up in these areas, in particular with reference to aggressive and submissive modes of behaviour.

Procedure and methods :

Children who at the age of 7 had been living for a minimum of three years in the areas chosen for the project were selected. These children were then matched into pairs, one member from a high-density multi-storey house area, the other member from an area of single private houses, according to sex, age, number of siblings and social economic class of parents. Three age groups take part in the project, i.e. children born in 1957, 1958 and 1959.

When the children were in the 1st grade, they were tested with Rosenzweig P-F Study, the children's parents were interviewed, schoolteachers rated the children on a rating scale for certain personality traits, sociometric tests and an intelligence test were also used at this stage.

When the children are in the 4th grade the following procedures are being used namely, an extended interview with the parents, a school motivation test and an intelligence test.

The concluding part of this longitudinal study is scheduled to take place when the children have reached the 7th grade. Procedures and methods for this part have not yet been completely decided upon.

D. 11. Informationsvärdet vid stoffbjudning med olika grad av konkretion : ett undervisningsförsök rörande retentions - och motivations effekter av verbal bjudning och flerkanal sbjudning i orienterings-ämnena på mellanstadiet (The value of information at subject-presentation with different levels of illustration (concretion))

Researcher : Dan Isacson

Starting date : 1966

Probable completion date : November 1968

Purpose :

To measure the relative learning and motivational effectiveness of different communication channels; single channel (oral) versus multiple channels (audiovisual) in general subjects in junior school (4, 5, 6 - *grundskola).*

Procedure and methods :

Rotation method in classroom-research (parallel equal groups).

Nature of explicit or implicit recommendations

The effectiveness of AV-equipment is, probably, overestimated.

D. 12. Problemställningar i samband med grupparbetsform vid vuxenundervisning (Problems concerning group method in adult training)

Researcher : Allan Jansson

Starting date : September 1966

Purpose :

Find out how grown-ups form groups for a project and how they like it

Procedure and methods :

Training in groups, sociometric data, questionnaires.

D 13. Undersökning av 4-åriga barns utveckling och uppfostran med inriktning på behandling (A study of the development and training of 4 year old children)

Researcher : Eva-Mari Köhler
Starting date : Autumn 1965
Probable completion date : Autumn 1969

Purpose :

A description of the development of four-year old children and the parents' attitude to training and the parents' principles for training. The project has also a therapeutic goal and aims to develop therapeutic programmes for simple behaviour disturbances and to evaluate these programmes.

Procedure and methods

Questionnaires to mothers and fathers, observation of the children in group, interview with mothers. Counselling and information to the parents. Programme for behaviour control.

Nature of explicit or implicit recommendations :

The results of the project will perhaps change educational and therapeutic practice in work with children in the mental health service. The project is part of a broader investigation with co-operation between pediatricians and educational researchers.

D. 14 ADL-träning i träningsskolan (ADL-training in the training school)

Researcher : Ingrid Liljeroth
Starting date : July 1st 1968
Probable completion date : 1970

Purpose :

A new law came into force on July 1st 1968 "Provision for certain mentally retarded children". It implies compulsory education for all mentally retarded children irrespective of the severity of the handicap. As a consequence of this law, the concept of education has to be broadened. In the new school for the mentally retarded, topics from new fields have to be included in the instruction. The goal is to make the pupils function as adequately as possible in society, according to their resources. This implies that the social fields will be important components of the training.

The objective of the project is to build up a programme for primary ADL-training which can be divided into the following four functions :

- ability to manage visits to the toilet
- ability to manage personal hygiene
- ability to manage eating and elementary table manners
- ability to manage dressing and undressing.

Procedure and methods :

The postulate is the model formulated by Ellis in an article where he introduced a theoretical analysis based on a molar behaviour theory. Observations, interviews and experiments where we analyse the components of the four functions and the difficulties, are made at first. After that we make the programmes and test them, analyse the results, make new programmes and retest them.

D. 15. Undersokning av lagpresterande elevers anpassning i olika klasstyper (A study of the adjustment of low-performing pupils in different types of school-classes)

Researcher : Torsten Simonsson

Starting date : Autumn 1967

Probable completion date : The first result will be published in the beginning of 1969.

Purpose :

There is a great number of pupils who according to their ability are borderline cases between regular classes and special classes in the elementary school. During the last years there has been an intensive discussion about the justification of placing these cases in special classes, especially in classes for slow learners and immature children. This project will investigate the social position of these low-performing pupils, their attitudes to school work, the attitudes of their class-mates to them and the teacher's judgment of them.

Procedure and methods :

The subjects of the investigation consist of two groups :

1. Pupils in classes for immature children, 2nd and 3rd grade, totalling 90 pupils
2. Pupils in regular classes from the same areas of the town and in the same grades.

Pupils from the two groups have been matched with regard to intelligence, sex and age.

Attitudes to the schoolwork have been measured by an attitude test, used by Olle Österling, adapted for this age-group and enlarged. The attitudes of the class-mates to the matched individuals have been measured by a test similar to the "Guess who ? test". The social position is tested by a sociometric test. The matched individuals have been judged by their teachers using a questionnaire. The data collection was started during the spring of 1968 and will continue during the spring of 1969.

D. 16. Några semantiska differentialers förmåga att förutsäga vissa av prestationsmotivets beteendekorrelat (The capability of some semantic differentials in predicting some behaviour-correlates of the achievement motive)

Researcher : Alf Svensson

Starting date : 1967

Probable completion date : 1969

Purpose :

See the title of the project.

Procedure and methods :

The test consists of twelve concepts which are characteristic of a high achievement motive. The subjects are told to rate these concepts along seven scales consisting of evaluative adjectives. On account of these ratings two extreme groups are chosen, which are supposed to have high, respective low achievement motivation. These groups are compared concerning their aspiration level, performance on a cancelling test, risk-taking and achievement in school in order to see if they differ in expected direction.

D. 17. Utbildning av yrkeslärare/hantverk och industri/ i Sverige (Training of vocational/technical teachers in Sweden)

Researcher : Bo Wahlund

Starting date : September 1968

Purpose :

The aim is to give a survey and description of the background and the development of vocational/technical teacher training in Sweden, the present situation of the training, future plans and issues and trends. Special attention will be given to organisation, aims and methods with particular emphasis on the evolution of practical instruction, in order to be of interest to future planning, research and training.

Procedure or methods :

Study of the literature on the subject, questionnaires.

D. 18. Studieval i skolan (Choice of courses in secondary school)

Researcher : Per Anders Westrin

Starting date : 1. 8 1963

Probable completion date : 1. 7. 1970

Purpose :

The purpose of the project is mainly to study the choice of courses of the students and their adjustment to the school situation. The project was planned in 1963 and the field-studies begun with a study of the students in the 7th grade in secondary school in 1964. A continuous follow-up has been going on since then with these students. Some of them are now in the last grade of the "gymnasium", and a new follow-up is planned to take place in the spring-semester 1969.

Procedure and methods :

a group-intelligence test
a need achievement test
the Colour Word test
sociometry test
questionnaires for the students
questionnaires for the parents
questionnaires for the teachers
interviews with the students
achievement tests

Nature of explicit or implicit recommendations :

Probably recommendations for finding the most adequate grade for differentiation in courses and differentiation in classes. We also hope to be able to give recommendations on how to advise the students in their choice of courses.

D. 19. Studieval i skola (Choice of courses in secondary school)

Researchers : Per Anders Westrin, Ingrid Näslund
Starting date : February 1966
Probable completion date : 1969

Purpose :

The purpose of the project is to construct a model for the students' admission to post-secondary education.

Procedure and methods :

In the 9th grade the students were given a group intelligence, WIT III, and a questionnaire, containing questions about attitude to school, study habits, vocational interests and so on. At the same time a questionnaire was sent to the parents, asking questions about their attitudes to schooling.

Nature of explicit or implicit recommendations :

Some of our recommendations will concern the problem of differentiation in school.

D. 20. Familjepreferenser i färg (FIF-testet) (Family preferences in colour (the FIF-test))

Researcher : Magnhild Wetterström
Starting date : 1967
Probable completion date : 1969

Purpose :

To find out if childrens' preferences in colour can be used to find out their sympathies and antipathies for the members of their family.

Procedure and methods

The FIF-test consists of cut-out figures presented one at a time in four copies with each copy in a special colour. First six "neutral" figures are presented (a butterfly, a droll, a princess, a shark, a vagabond and an umbrella). The respondent is to point out the most positive and the most negative copy of each figure. This way an individual colour preference scale can be constructed.

Then figures of a mother, a father, a teenager-boy, a teenager-girl, a younger boy etc. are presented, and the assumption is, that the respondent projectively gives his/her preferences to the family members by stating which copy is most and least similar to the member in question.

80 pupils have been tested and retested. Validation is to be done on a population of mentally ill children. Anamnesis plus psychologist's evaluation will be used as validation instruments. The FIF-test will be compared to the Family Relation Test (FRT).

No. 4

Name of institute :	***PEDAGOGISK-PSYKOLOGISKA INSTITUTIONEN VID LÄRARHÖGSKOLAN I MALMÖ*** ***(Department of Educational and Psychological Research, Malmö School of Education)***
Address :	***Fack 200 45 Malmö 23, Sweden***
Director :	***Åke Bjerstedt, Professor***

A. Historical

1. Year of foundation : 1962

2. On whose initiative was the institute founded ?

   On state initiative.

3. What were the reasons, developments etc., that led to its foundation ?

   In general - increased demand for qualified educational research and for better teacher training. More specifically, the foundation of the Malmö research department is part of a plan to erect research departments within all major teacher training institutes (*"större lärarhögskolor"*, here called Schools of Education) in Sweden. The first of its kind (headed by Torsten Husén) was set up in 1956 at the Stockholm School of Education. The second to appear was our department in Malmö. The third (headed by Karl-Gustaf Stukát) was erected in 1965 at the Göteborg School of Education, and the fourth (headed by Sten Henrysson) in 1968 at the Umeå School of Education. Within the near future Linköping and Uppsala will get similar departments At that time Sweden will have ten major institutes for educational research - six within schools of education and four within universities (in Göteborg, Lund, Stockholm and Uppsala)

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

   The Department of Educational and Psychological Research is part of the Malmö School of Education. It is also connected with the University of Lund, however. The academic courses for University degrees in Education at Lund are divided into alternative lines, and one of these is arranged by and located at the Malmö School of Education. The director of the Malmö department is also a member of the Social Science Faculty at the University of Lund.

2. Do you have a directing, governing or advisory board ? (Functions, bodies represented on it etc.)

   Since universities and schools of education in Sweden are under separate governing bodies, the Malmö Department of Educational and Psychological Research is in a somewhat peculiar position as part of two different hierarchical systems. To start with, it is under the president (*"rektor"*) of the School of Education, especially in its function of being responsible for education and psychology courses integrated with teacher training. The National Board of Education (*"Skolöverstyrelsen"*) is the governing body for all schools of education in Sweden. Secondly, however, it is also under the University of Lund and the University Chancellor's Office (*"Universitetskanslerämbetet"*) with respect to its academic courses in Education and its research training. Most of its research work, finally, is done under contracts drawn up in co-operation between research teams, the director of the department and some fund-giving authority. In its research functions, therefore, the department has some degree of independence from both of the two hierarchical systems referred to. Most of the research funding, however, originates at the present time from the National Board of Education and is channelled through its small (basically two individuals) but influential Research Planning Bureau L-4. Research projects financed through L-4 may originate in two ways. The Malmö Department may submit proposals on its own initiative, or Bureau L-4 may indicate that it would be "receptive" to a proposal within a particular problem area. So far, most of the projects have been of the self-initiative type. The bureau's recommendations are made after discussions with a consulting committee, consisting mainly of department directors, which means that the departments are reasonably influential in the decision process; there is a constant dialogue between departments and the planning bureau concerning both funding and planning.

3. What divisions, sections, units etc., exist in your institute ?

The Department of Educational and Psychological Research has no formal subdivisions, but functions as one unit. Informally, however, three sections are in operation : (1) Training Section A (responsible for courses in education and psychology, integrated in the teacher training); (2) Training Section B (responsible for courses for university degrees and research training); and (3) the Research Section. The last section, mainly made up of the research projects operating at a particular time, may be sub-divided into three major sub-sections for research (dealing with subject-matter oriented, instructor-oriented, and pupil-oriented research, respectively) and a section for publications and reports. Several of the department members function in more than one section, however; the three functional sub-areas are, therefore, fairly closely integrated.

The Research Section

SECTION I : Subject-matter presentation

Subject-matter oriented research, educational technology (including language laboratories and programmed instruction), development of instructional methods and materials

Main research and development projects :

IMU : Development of individualised instruction in mathematics

Project leader : Curt Öreberg
Scientific adviser : Ingvar Werdelin
Others : Lars Jivén et al.

UMT : Development of methods and materials in German as a foreign language

Project leader : Ebbe Lindell
Ass. project leader : Horst Löfgren
Others : Ekholm-Erb et al

BIM : Concept learning in school mathematics

Project leader : Ingvar Werdelin
Others : Ann Martinsson, Barbro Tropé et al.

SECTION II : Teachers, teachers of teachers, and school leaders

Instructor-oriented research, occupational analysis, selection and training methods, teacher personality and effectiveness. Main projects :

BUFS : Job analysis of school leaders, tutors etc.

Project leader : Kurt Gestrelius
Ass. project leader : Alger Klasson

PIL : Job analysis of teachers : education in teacher training

Project leader : Bertil Gran
Ass. project leader : Gert Löfqvist
Leader of sub-project on role-playing and role analysis : Lennart Wiechel

ITV : Closed-circuit television in teacher training

Project leader : Åke Bjerstedt
Ass. project leader : Bertil Gran
Others : Bernhard Bierschenk, Jan-Evert Svensson

L : Teacher personality and teacher effectiveness

Project leaders : Per Sundgren and Ake Bjerstedt
Ass. project leader : Birgitta Höglund

SECTION III : Pupil development, pupil-pupil and pupil-teacher interactions

Pupil-oriented research, socio-psychological and socio-educational analyses of the school situation. Main projects :

S : Aspects of social training

Project leader : Åke Bjerstedt
Ass. project leader : Bereket Yebio
Others : Elisabeth Jernryd, Evy Gustafsson, Brigitte Valind

K : Creativity and autonomy in school children

Project leader : Åke Bjerstedt
Ass. project leader : Göran Hansson
Others : Anneli Eriksson

LE : Preparation, process and product in teacher-pupil interaction

Project leader : Åke Bjerstedt
Ass. project leader : Gunnel Ankarstrand-Lindström
Others : Barbro Lönnblom

VGL : Effects of class structure and team work

Project leaders : Ingvar Werdelin and Kjell Aström
Others : Birgitta Nyrén et al

PUBLICATIONS SECTION

Reports and Publications - 8 series

1. Pedagogisk-psykologiska problem
   (Swedish-language reports, various problem areas)
2. Educational and psychological interactions
   (English-language reports, sociological and psychological orientation)
3. Didakometry
   (English-language reports, focusing on educational technology and evaluation)
4. Reprint series
   (Journal reprints, usually in English or Swedish)

5. Testkonstruktion och testdata
(Reports on test constructions, in Swedish)

6. Kompendieserien
(Preliminary text-book versions, literature surveys etc. ; in Swedish)

7. Didakometrie und Soziometrie
(German-language reports, usually brief notes on ongoing projects)

8. Pedagogisk orientering och debatt
(Books, in Swedish)

Editor : Ake Bjerstedt

4. How far do you participate in the initial and/or further training of teachers ?

The Department of Educational and Psychological Research is responsible for the courses of Education and Psychology given to all categories of teacher trainees and teachers, at the Malmö School of Education, including elementary school teachers, subject-matter teachers for the secondary level, special teachers for students with learning difficulties, etc. In addition, teachers in service may follow evening courses in the subject of Education up to the level of a doctoral degree.

5. Present size of staff :

		Full-time	Part-time
Total	70	39	31
Researchers (including both senior and junior levels)		7	23

A peculiar fact is that there is not a single person, among these 70 members of our department, with a full-time appointment for research only on a long-range basis. The majority of the research staff is made up of assistants (usually with part-time appointments on a one-year basis). This type of set-up gives the staff structure a considerable degree of potential instability. There is a wide-spread wish in education departments in Sweden to get a larger number of long-range appointments (within the basic budget) to ensure greater continuity and stability; and a governmental committee working on the organisation of education departments is expected to deal with this question within the near future.

6. Total budget in Swedish Crowns :

	1966	1967	1968
For salaries	1,381,785.-	2,051,438.-	2,627,510.-
For other purposes	278,326.-	292,219.-	317,000.-
Total	1,660,111.-	2,343,657.-	2,944,510.-
Percentage distribution over sources :			
State of Sweden, basic budget	48.3%	46.6%	38.2%
National Board of Education	40.5%	43.6%	56.5%
Other sources	11.2%	9.8%	5.3%

Note : Salaries are added per calendar year as stated in the headings. Sums for other purposes, however, are added per budget year.

As can be seen, the research and development funds (based upon project contracts) from the National Board of Education make up an increasing proportion of our budget over the last three years (from about 40% in 1966 to about 56% in 1968).

The major part of the funds under "other sources" comes from the Social Science Research Council.

7. Main fields of research activity :

See Research Section above and C and D below.

C. Major research projects reported in the academic years 1966/67 and 1967/68

C. 1. A study of factors influencing attitudes towards and interest in mathematics and other school work

Researcher : Ingvar Werdelin

Grants from : The Swedish Council for Social Science Research

Purpose and objectives :

The aim of this project was to investigate what factors influence attitudes towards and interest in school work. Among the factors studied were : intelligence; performance and success in school as measured by marks; certain types of observable behaviour like the aggressive behaviour, nervous behaviour, and behaviour involving social interaction with classmates; and relationships with parents. A series of sub-studies have been carried out such as factor analysis of attitudes towards school work, studies of the relationship between teacher ratings, peer ratings and self ratings of behaviour in school, factor analysis of behaviour in social situations, analysis of differences in attitudes and interest in groups of students with different scholastic experience, etc. The major research findings are summarised in the following papers.

References :

Werdelin, I. *A study of the relationship between teacher ratings, peer ratings, and self ratings of behaviour in school.*. Educational and Psychological Interactions (Malmö : School of Education), No. 11, 1966.

Werdelin, I. *Factor analysis of an inventory of behaviour in social situations* Educational and Psychological Interactions, No. 9, 1966.

Werdelin, I. *A study of attitudes towards school.* Educational and Psychological Interactions. No. 8, 1966.

Werdelin, I. *Factor analysis of a questionnaire of attitudes towards school work.* Educational and Psychological Interactions, No. 19, 1967.

Werdelin, I. *Factor analysis of questionnaires of attitudes towards school work.* Scandinavian Journal of Psychology, 1968.

C. 2. Statistics for educational planning

Researcher : Ingvar Werdelin

Starting date : 1964

Completion date : 1967.

Purpose :

Educational planning is essentially based on correct information about various facts in the country in question. For this reason we need correct statistical data which are treated in a suitable way. Therefore the purpose of the present project has been :

(1) to study what statistical data are generally available in an "under-developed" country.

(2) To put together methods of treating these data in a systematic way and evaluate these methods from the point of view of an "under-developed" area, and

(3) to try and create new methods of treating available data.

As a result of this a series of papers have been prepared, some of which are mentioned in the list of references, and a manual or text book comprising old and new methods has been written.

References :

Werdelin, I. *On the projection of the number of elementary school entrants.* Scientia Paedagogica Experimentalis, 1966, III : 1, 43-62.

Werdelin, I. *On the use of certain fundamental equations for the projection of school enrolment and the measurement of the efficiency of a school system.* Scientia Paedagogica Experimentalis, 1966, III : W, 190-208.

Werdelin, I. *On the quality of the educational system as seen from the point of view of educational statistics.* Didakometry, No. 9, 1966.

Werdelin, I. *A school enrolment model.* Educational and psychological Interactions, No. 12, 1966.

Werdelin, I. *Population statistics and educational planning.* Educational and psychological Interactions, No. 13, 1966.

Werdelin, I. *Statistics for educational planning and administration.* Educational and Psychological Interactions, Nos. 22 - 26, 1967.

C. 3. The effect of moderate heat on children's ability to learn

Researchers : Ingrid Holmberg and David Wyon

Purpose :

High temperatures in classrooms, not unusual on hot days, are often criticised by teachers, but there are few data on the objective effects, if any, of moderately high temperatures in natural classroom settings. The aim of the present project was to investigate whether children, 9 and 11 years old, learn and remember less well at an ambient temperature of 27 and 30 degrees (Centigrade) than they do at 20 degrees.

Methods and conclusions :

As subjects were used 50 pupils who were 9 years old, and 80 who were 11 years old. All attended experimental classes at the School of Education in Malmö. Temperature control was achieved by means of three electric fan heaters, placed between the curtains and the window. Special measuring apparatus connected to a six-channel paper-chart recorder provided reliable readings of air temperature at a distance. The children were given special lessons, well structured in advance, as well as achievement tests in mathematics, reading speed, reading comprehension, and spelling. Slight effects of moderate heat changes were found (for details, cf. publication below).

References :

Holmberg, I. and Wyon, D. *Skolprestationernas beroende av temperaturen i klassrummet.* Pedagogisk-psykologiska problem (Malmö : School of Education), No. 55, 1967.

D. Major research projects in progress

D. 1. Development of methods and materials for individualised mathematics instruction (IMU = Swedish : "Individualiserad matematik-undervisning")

SWEDEN

Project leader : Curt Öreberg

Scientific adviser : Ingvar Werdelin

Others : Lars Jivén, Inger Larsson et al.

Grants from : The National Board of Education

Completion date : 1975

Purpose :

(a) To construct and test materials for individualised instruction in mathematics.

(b) To develop suitable instructional methods to use with this material.

(c) To study how pupils should be grouped and teachers employed to attain the maximum effect when using this material.

(d) Measure, with the help of the material constructed, the effects of completely individualised instruction, possibly by comparison with convention class instruction.

Procedure :

New materials have been constructed for grades 7 - 9 in the Swedish comprehensive school and tried out in several preliminary versions. The effect of individualised instruction compared to class instruction has been tested in preliminary experiments, and further experimentation has been planned. The Trump model and team teaching have been chosen as an organisational model : its effect will be studied in a series of experiments.

In these experiments the emphasis is not only on the achievement of the pupils, but also on their attitude development, on the development of their personality and on the development of the social structure in the classes. So far the stress has been on grades 7 - 9 in the Swedish school system, but ancillary studies have been carried out in grades 4 - 6 and 10 - 12.

References :

Berglund, L.G. and Jivén, L-M. *IMU-projektet : Informationsgivning i relation till stegstorlek.* Pedagogisk-psykologiska problem, No. 65, 1968.

Håstad, M., Svensson, L. and Öreberg, C. *Some facts about IMU.* Reprint Series (Malmö : School of Education), No. 53, 1968.

Jivén, L-M. *IMU-projektet : Rapport från utprovning av IMU-systemet pa grundskolans högstadium.* Pedagogisk-psykologiska problem, No. 63, 1968.

Jivén, L-M. and Öreberg, C. *IMU-projektet : Preliminär plan för effektundersökning på grundskolans högstadium 1968 - 1971.* Pedagogisk-psykologiska problem, No. 71, 1968.

Jivén, L-M. and Öreberg, C. *The IMU Project : Preliminary plan for investigating the effects of a system for individualised mathematics teaching.* Didakometry, No. 22, 1968.

Öreberg, C. *Individualiserad matematikundervisning : Rapport från pågående försök.* Pedagogisk-psykologiska problem, No. 8, 1964.

Öreberg, C. *Försök med flexibel elevgruppering och lärarlag.* Pedagogiska meddelanden, 1966.

Öreberg, C. *Material för individualiserad matematikundervisning.* Pedagogiska meddelanden, 1966.

Öreberg, C. (Ed.) *IMU-projektet : Målbeskrivning för ett självinstruerande studiematerial i matematik for grundskolans högstadium.* Pedagogisk-psykologiska problem, No. 43, 1966.

Öreberg, C. *IMU-systemet.* Undervisningsteknologi, 1968.

D. 2. Development of methods and materials for the teaching of German as a foreign language (UMT = Swedish : "Undervisningsmetodik, tyska")

Project leader : Ebbe Lindell

Ass. project leader : Horst Löfgren

Others : Bertil Ekholm-Erb, Bertil Engh et al.

Grants from : The National Board of Education

Purpose :

The project has a two-fold aim : (1) to investigate scientifically the goals and methods of foreign language teaching, and (2) on the basis of this to construct controlled learning materials.

Methods :

The analysis of educational goals comprises studies of the target language from several aspects, e.g. frequency of words and linguistic structures and the existence of linguistic contrasts. It also included analysis of errors made by pupils when studying the language. These language errors are in turn subjected to a tolerance test by native experts. Finally the analysis of goals include analysis of existing text books.

The research on teaching methods has been directed to several such suggestions as have been made by advocates of "direct" or "natural" methods, i.e. the total absence of text during some initial period, the training of structures in context without the use of grammar paradigms, and the avoidance of glossaries with translations to the mother tongue. As far as our experience within the project goes, many of these ideas seem to have rather weak empirical foundation.

The construction of material has three main phases : writing, testing, and standardisation. The first is the job of language teachers after the educational goals have been formulated. The second and third phases are the tasks of teachers and educational researchers together. During the academic year 1967/68 we were engaged in testing and revising materials for grade 7 of the Swedish comprehensive school. Courses for grades 8 and 9 will follow. The materials integrate texts, grammar, programmed instruction, language laboratory exercises, etc., and the results are examined by the aid of diagnostic tests.

References :

Engh, B. *Feltyper och felfrekvenser i en grupp gymnasieelevers skriftliga prestationer i ämnet tyska.* Pedagogisk-psykologiska problem, No. 57, 1968.

Engh, B. *Feltyper och felfrekvenser i årskurs 9 vid fri skriftlig produktion i tyska.* Pedagogisk-psykologiska problem, No. 72, 1968.

Grunewald, G. *En studie av ordföljden i tyska och svenska.* Pedagogisk-psykologiska problem, No. 59, 1968.

Kitzing, K. *Några malmöelevers uttal av taska spiranter och affrikator.* Pedagogisk-psykologiska problem, No. 49, 1967.

Lindell, E. (Ed.) *Språkprojektet Tyska 7 läsåret 1965 - 66 : I. Målen för undervisningen.* Pedagogisk-psykologiska problem, No. 35, 1966.

Lindell, E. (ED.) *Språkprojektet Tyska 7 läsåret 1965 - 66 : II. Elevförutsättningar och teknisk utrustning.* Pedagogisk-psykologiska problem, No. 37, 1966.

Lindell, E. (Ed.) *Med eller utan text ? Empirisk belysning av en stridsfraga beträffande nybörjarundervisning i främmande språk.* Pedagogisk-psykologiska problem, No. 41, 1966

Lindell, E. (3d.) *Två språkpedagogiska metodförsök : I Arbetsformer i språklaboratorieum. II. Försök med en gammal paradigm.* Pedagogisk-psykologiska problem, No. 44, 1966.

Lindell, E. (Ed.) *Kombination av språklaboratorieövningar med klassrumsundervisning.* Pedagogisk-psykologiska problem, No. 46, 1967.

Lindell, E. (Ed.) *Kombination av språklaboratorieövningar och klassrumsundervisning, ett parallellförsök.* Pedagogisk-psykologiska problem, No. 50, 1967.

Lindell, E. (Ed.) *Ett försök med självinstruerande material i språklaboratorieum och i skriftlig programmering.* Pedagogisk-psykologiska problem, No. 53, 1967.

Lindell, E. (Ed.) *Elevattityder mot olika arbetssätt i tyska.* Pedagogisk-psykologiska problem, No. 58, 1968.

Löfgren, H. (Ed.) *Kombination av klassrumsundervisning och övningar av språklaboratorietyp : Exempel på första utprövning av en undervisningsenhet.* Pedagogisk-psykologiska problem, No. 52, 1967.

Löfgren, H. *Försök med två olika typer av ordlistor.* Pedagogisk-psykologiska problem, No. 62, 1968.

Pettersson, L. *Intonationsförloppens registrering och bearbetning vid språklaboratorieförsök : En metoddiskussion i anslutning till data från undervisning i franska.* Pedagogisk-psykologiska problem, No. 38, 1966.

Schwandt, E. *Innehållsanalyser av läroböcker i tyska för grundskolans årskurs 8.* Pedagogisk-psykologiska problem, No. 66, 1968.

D. 3. Studies of concept learning and concept formation in school mathematics and other fields. (Project BIM = Swedish "Begreppsinlärning i matematik etc.")

Project leader :	Ingvar Werdelin
Others :	Ann Martinsson, Barbro Tropé
Grants from :	The Swedish Council for Social Science Research.

Starting date : 1 July 1966.

Completion date : in 1969.

Purpose and methods :

In close connection with other studies of mathematics teaching at the School of Education, certain basic problems concerning concept learning and concept formation are studied. In the first place the following aspects have been taken up :

(1) The relationship between concept formation and concrete educational materials (several classroom experiments have been carried out).

(2) The so-called discovery method and its importance to concept formation and concept learning (a series of classroom experiments).

(3) The automatisation process when certain materials are being practised in school (factor analysis and experiments).

(4) Comparison between abstract concepts and concepts based on concrete perception in problem solving and preference experiments (experiments).

(5) The development of independence of the concrete perception and the concrete material in concept formation (field study).

References :

Persson, B., Werdelin, I. and Wimo, K. *Experimental studies of abstract and concrete concepts in problem solving.* Didakometry, No. 19, 1968.

Sjöberg, K. and Tropé, B. *The value of external direction and individual discovery in learning situations : The learning of a grammatical rule.* Didakometry, No. 18, 1968.

Werdelin, I. *The value of external direction and individual discovery in learning situations : The learning of a mathematical principle.* Didakometry, No. 12, 1966.

Werdelin, I. *The value of external direction and individual discovery in learning situations : The learning of a foreign alphabet.* Didakometry, No. 14, 1967.

D. 4. Job analysis as a basis for education and further education in the school sector : school principals, lecturers on methods, and tutors. (Project BUFS = Swedish : "Befattningsanalyser för utbildning och fortbildning inom skolsektorn")

Project leader : Kurt Gestrelius

Scientific adviser : Åke Bjerstedt

Ass. project leader : Alger Klasson

Grants from : The National Board of Education

Purpose :

When a certain official is to be trained, different kinds of preparatory work are required if efficient training is to be provided. A systematic determination of the goals of training seems to be an essential element of this preparation. Therefore we need a detailed and well-documented description of the official's activities on which to base the analysis of the aims and contents of the education. Such "job analyses" are an essential part of the present project and will cover three types of personnel : school principals, lecturers on methods, and tutors guiding the teacher trainee's first teaching experiences. A second step involves translating the job analysis data into recommendations for training contents and training methods.

Procedure :

In order to carry out the job analyses we will use the following methods :

(a) interviews,
(b) critical incident techniques,
(c) direct observations,
(d) diary techniques,
(e) questionnaires.

References :

Gestrelius, K. *Job analyses as a basis for education and further education in the school sector.* School Research Newsletter, Stockholm : National Board of Education, 1967 : 5.

Gestrelius, K. *Försök till subjektivitetskontroll i samband med analyser av bandade explorativa intervjuer.* Pedagogisk-psykologiska problem, Nr. 67, 1968.

Gestrelius, K. *Systematisk vuxenutbildning.* Lund : Uniskol, 1968.

D. 5. Education in teacher training based on job analysis of teachers, with special emphasis on role playing and role analysis (Project PIL = Swedish : "Pedagogik i lärarutbildningen")

Project leader : Bertil Gran

Ass. project leader : Gert Löfqvist

Leader of sub-project : (on role playing and role analysis) : Lennart Wiechel

Scientific adviser : Åke Bjerstedt

Grants from : The National Board of Education

Purpose :

(a) To select, with the aid of job analysis of teachers, those functions of the teacher which seem most in need of special training ;

(b) To collect information on interactional situations typical and critical for teacher training according to experts and observations ;

(c) To develop a comprehensive methods-and-material system for education, thereby exploring the usefulness of both closed and open systems ;

(d) To develop models of role-playing for both action training and observational training ;

(e) To try out and evaluate the methods and materials developed, adapting them to various specialisations (age levels and subject-matter orientations).

Methods :

(a) Text analyses, interviews, questionnaires, and observations as a basis for job descriptions and situational catalogues ;

(b) Step-wise construction of methods-and-materials ;

(c) Experimental small-group situations ;

(d) Effect evaluations ; etc.

References :

Bjerstedt, Å. *Några interaktionsorienterade forskningsprojekt.* Pedagogisk-psykologiska problem, No. 56, 1968. Pp. 43 ff.

Gran, B. *Några aspekter på lärarutbildningens målsättning.* Reprint Series (Malmö : School of Education), No. 10, 1965.

Wiechel, L. *Rollspelet i några pedagogiska tillämpningar.* Pedagogisk-psykologiska problem, No. 51, 1967.

D. 6. A study of closed circuit TV, mainly as a system of educational technology within an integrated teacher training (Project ITV = Swedish : "Intern television")

Project leader : Åke Bjerstedt

Ass. project leader : Bertil Gran

Others : Bernhard Bierschenk, Jan Evert Svensson

Grants from : The National Board of Education

Purpose :

(1) To develop a model for systematic construction and evaluation of CCTV programmes, and

(2) to study a number of questions, which are brought up when CCTV is used as a sub-system in an integrated teacher training, e.g. the shape of pre- and post-treatments of programmes, the use of video recordings to show teacher trainees their own teaching ("self-confrontations"), the construction of video-taped behaviour tests of the simulator type, etc.

Methods :

During the next few years a large number of programmes will be produced for the sake of teacher education. Some of these programmes will be used in systematic research in accordance with the aims of the project. In addition to this some construction will be done for the sake of the experiment itself. The following methods will be used : achievement tests and attitude questionnaires (in connection with the evaluation of programme effectiveness), experimental small-group techniques, step-wise test construction, etc. (More detailed information on the project can be found in Bjerstedt 1968 c, see below.)

It is planned that the project will be completed in 1971.

References :

Bjerstedt, Å. *CCTV and video recordings as "observation amplifiers" in teacher training.* Educational Television International, 1967, 1, 300 - 312. (a).

Bjerstedt, Å. *Das ITV Projekt : Internes Fernsehen in der Lehrerausbildung.* Didakometrie und Soziometrie, Nr. 2, 1967. (b)

Bjerstedt, Å. *A simulator-test approach to the study of teachers' interaction tendencies.* Educational and Psychological Interactions, No. 29, 1968. (a).

Bjerstedt, Å. *Att mäta interaktionstendenser.* Testkonstruktion och testdata (Malmö : School of Education), No. 3, 1968. (b).

Bjerstedt, Å. *Några interaktionsorienterade forskningsprojekt.* Pedagogisk-psykologiska problem, No. 56, 1968. (c).

Bjerstedt, Å. *Schwierigkeiten und beobachtungstechnologische Möglichkeiten in der Lehrerausbildung.* Zeitschrift für erziehungswissenschaftliche Forschung, 1968, 2, 59 - 82. (d).

Löfqvist, G. *Användning av ITV vid undervisning i muntlig framställning.* Pedagogisk-psykologiska problem, Nr. 61, 1968.

D. 7. Teacher effectiveness and teacher personality (Project L = Swedish : "Lärarlämplighet och lärarpersonlighet")

Project leaders : Per Sundgren and Åke Bjerstedt

Ass. project leader : Birgitta Höglund

Grants from : The Swedish Council for Social Science Research

Purpose :

To answer the following and similar questions : To what extent is it possible to predict teacher efficiency at the lower and middle stages of the Swedish comprehensive school on the basis of psychological tests and other instruments given before the teachers begin their education at teacher training institutions ? What variables or combinations of variables are most useful ?

Methods :

Three main types of variables have been used :

(a) Prediction variables : test variables from the entrance examinations,

(b) Intermediate criteria : rating variables and marks given during the training period,

(c) Terminal criteria : data found when testing the pupils of the teachers on several occasions to get "product criteria" .

It is supposed that the efficiency of the teacher can be seen in his ability to influence his students in a positive way. The attitudes of the teachers are also used as criteria

Students accepted in the school of Education in Malmö on four consecutive occasions (terms) were used as the experimental group in this study. In its first phase they were followed till they got their diploma, $2\frac{1}{2}$ years after their entrance. This means that the prediction instruments were validated against criteria consisting of ratings and marks given during the training period. As it seemed essential that the teachers should be studied also after they got their diploma, this information is supplemented by data on their efficiency in unguided practical work (field or terminal criteria). At present the project is concentrated on this phase.

The project started in 1962. In the project phase so far reported a total of 258 teachers have taken part ; 59 prediction variables and 20 criterion variables have been used.

References :

Bjerstedt, Å. *Interaction-oriented approaches to the assessment of student teachers.* J. Teacher Education, 1967, 18, 339 - 357.

Bjerstedt, Å. *Några interaktionsorienterade forskningsprojekt.* Pedagogiska-psykologiska problem, No. 56, 1968

Bjerstedt, Å. and Sundgren, P. *Teacher personality and teacher effectiveness.* Educational and Psychological Interactions, No. 20, 1967.

Bjerstedt, Å. and Sundgren, P. *Interaction tendencies, personality and teacher effectiveness.* Scand. J. educ. Res., 1968, 12, 51 - 90,

Bjerstedt, Å. and Sundgren, P. *Lehrereignungs- Prädiktoren, Lehrer-Schüler-Interaktion und Produkt-Kriterien.* Didakometrie und Soziometrie, Nr. 4, 1968.

Sundgren, P. *Rollpreferenser i läraryrket.* Pedagogisk-psykologiska problem, No. 26, 1966.

Sundgren, P. *Lärarlämplighet : Relationer mellan några kriterier.* Pedagogisk-psykologiska problem, No. 34, 1966.

Sundgren, P. *Lärarlämplighet och lärarpersonlighet.* Pedagogisk-psykologiska problem, No. 47, 1967.

D. 8. Social development and social training (Project S = Swedish : "Social utveckling och fostran")

Project leader : Åke Bjerstedt

Ass. project leader : Bereket Yebio

Others : Elisabeth Jernryd, Evy Gustavsson, Brigitte Valind

Grants from : The National Board of Education

Purpose :

(1) To map certain essential aspects of the social development of children in the comprehensive school.

(2) To explore different possibilities of influencing this development in a direction considered desirable.

(3) To develop experimental methods of evaluating the effects of such attempts at modifying the social development.

At present it is planned that at least three different aspects shall be studied within the project :

(1) Co-operativeness (adequate intra-group communication and handling of conflicts; ability to participate in democratic choice and decision procedures);

(2) Optimum authority and propaganda resistance (ability to take an independent stand, resistance to persuasion not founded on facts) as a result of e.g. special training in the critical reading of newspaper articles and propaganda-coloured materials;

(3) "World-mindedness" (the understanding of and feeling of responsibility for the development, also in other countries, resistance to the tendency to look down upon what is different, etc.) as a result of e.g. separate educational programmes on interactivities and problems in other cultures.

The first-mentioned aspect will, to some extent, be dealt with in an independent subproject, in which students of other ages will also be involved (not only from the comprehensive school level, but also from the grade 10 - 12 level, and the university level).

It should be added that preliminary studies now being carried out might change these aims to some extent.

Methods :

The mapping will be carried out by means of observations, questionnaires, and objective tests. Experimental small group techniques will be included. Systematic step-wise construction of certain study materials will be tried out within the experiments on influence processes. At present, it is estimated that the study can be completed in 1970/71.

References :

Bjerstedt, Å. *Några interaktionsorienterade forskningsprojekt.* Pedagogisk-psykologiska problem, No. 56, 1968.

Bjerstedt, Å., Bierschenk, B. and Löfgren, H. *Probleme der Schuldemokratie* Didakometrie und Soziometrie, No. 5, 1968.

D. 9. Creativity, autonomy. and techniques of learning

Project leader : Åke Bjerstedt

Ass. project leader : Göran Hansson

Others : Anneli Eriksson

Grants from : The National Board of Education

Purpose :

It aims at

(a) constructing and evaluating tests which are practically useful in school situations for the identification and measurement of autonomy and creativity,

(b) creating a methodological plan for the systematic education for autonomous and creative behaviour, on the basis of, among other things, explorative studies of the ways in which autonomy and creativity are visible in school situations and preceived and treated by teachers, and

(c) studying the effects of certain aspects of such a plan

Methods :

The following steps seem probable :

(1) Investigations of the opinions of teachers,

(2) Exploratory class-room studies,

(3) Construction and evaluation of group tests for the identification and measurement of autonomy and creativity,

(4) The drawing-up of a methodological plan with the aim to support autonomous and creative behaviour tendencies,

(5) Studies of some of the effects of such a plan

In a preliminary study certain creativity and autonomy tests have been tried out Generally, the project is still in its exploratory phase, and the steps outlined above may have to be revised on the basis of data obtained in the present preliminary studies It is possible that the test construction phase will involve so many problems that the project has to concentrate a relatively larger part of its total work on this aspect

The project, which will probably be a four-year one, started in 1967

References :

Bjerstedt, A *Några interaktionsorienterade forskningsprojekt.* Pedagogisk-psykologiska problem, No 56, 1968

D 10. Preparation, process and product in teacher-pupil interaction (Project LE = Swedish "Lärar-elev-interaktion")

Project leader : Ake Bjerstedt

Ass. project leader : Gunnel Ankarstrand-Lindström

Others : Barbro Lönnblom

Grants from : The Scandinavian Culture Fund

Purpose :

It is part of a Scandinavian project Four main aims can be separated :

(a) The construction, evaluation, and improvement of different methods of observation and registration, applicable when we study complex didactic processes

(b) Partial mapping of the structure of the didactic interaction (focusing on certain categories of variables, e g , teacher personality and the social perception of the teachers, effects on the pupils as to independence and co-operativeness)

(c) The formulation of more definite models for didactic interaction

(d) Possible recommendations for application, e g , in the form of advice for the organisation of teacher role training and for new instruments for the evaluation of teacher efficiency

Methods :

The studies are carried out both as observations of "naturalistic" class-room situations and as small group experiments (video-recorded "micro-teaching" with mirror-viewing). The small-group studies typically use a three-phase paradigm :

(1) preparatory phase,
(2) process phase, and
(3) product phase.

The project will probably be completed in 1970.

References :

Bjerstedt, Å. *Das Lehrer-Schüler Projekt : Präparation, Prozess und Produkt im didaktischen Verlauf.* Didakometrie und Soziometrie, Nr. 1, 1967.

Bjerstedt, Å. *Några interaktionsorienterade forskningsprojekt.* Pedagogisk-psykologiska problem, No. 56, 1968.

Bjerstedt, Å. *Preparation, process, and product in teacher-pupil interaction.* Educational and Psychological Interactions, No. 28, 1968.

No. 5

Name of institute : ***PEDAGOGISKT CENTRUM STOCKHOLM***
(Centre for Educational Development, Stockholm)

Address : ***Fack 104, 35, Stockholm 23, Sweden***

Director : ***Dr. phil. Ingvar Johannesson***

A. Historical

1. Year of foundation : 1966/67

2. On whose initiative was the institute founded ?

   The Stockholm Local Educational Authority

3. What were the reasons, developments etc., that led to its foundation ?

   The work of the development of education has to be intensified and systematised by teamwork between scientists, teachers and other experts.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

   It is a section of the Stockholm Local Educational Authority.

2. Do you have a directing, governing or advisory board ? (Functions, bodies represented on it)

   An advisory board. Mutual information and discussions about the planning and also the completed projects.
   15 members. (The director of Education, inspectors of schools, representations of headmasters and teachers in Stockholm).

3. What divisions, sections, units etc., exist in your institute ?

Section I : grade 1-6;
Section II : grade 7 - 9
Section III : High School.

4. How far do you participate in the initial and/or further training of teachers ?

Not at all.

5. Present size of staff :

		Full-time	Part-time
Total	23	15	8
Researchers		13	

6. Total budget in Swedish crowns :

1966	-
1967	740,000
1968	720,000

7. Main fields of research activity :

Innovation of the internal work in the schools.

C. Major research projects reported in the academic years 1966/67 and 1967/68.

No reports yet for 1966/67 and 1967/68.

D. Major research projects in progress

The Centre for Educational Development in Stockholm began its work in the autumn of 1967. Three sections were planned as well as a department for the head of the Centre. Unfortunately there have been no competent applicants for the posts as research officers in section 2 : the upper departments of the comprehensive school and section 3 : the Swedish high school (gymnasium) and the specialised professional school (*fackskola*). For this reason the list of the projects below refers only to the department of the head of the Centre and section 1 : the lower and middle departments of the comprehensive school (grades 1 to 6).

List of projects

0001 Project SIFON
An educational system with optimal co-operation and individualisation in a flexible organisation.

The section of the head of the Centre

A. Research in progress

0061 The intellectual development of children in relation to their physical development, personality factors and environment

0121 Developmental background of good and poor readers

0081 Outsiders in the school class - causes and prevention

B. Planned research

0031 Trials with different forms of adjustment to school (beginners)

0062 Identifying emotionally and socially disturbed beginners

0063 Pupil observation and description

0082 Co-operation between pupils and training to work together

0051 Marks and other forms of reporting pupils' achievements.

Section 1 : The lower and middle departments of the comprehensive school

A. Research in progress

1121 How did you like the book ? (Composition of a class library)

1321 Development of an instrument for measuring the readability of German texts for school use.

1521 Music Curriculum for the musical classes

B. Planned research

1122 Reading material for special education

1123 Reading training in the middle department

1441 Authentic pictures in history books

1171 Handwriting practice

No. 6

Name of institute : *PEDAGOGISK-PSYKOLOGISKA INSTITUTIONEN LÄRARHÖGSKOLAN I STOCKHOLM*
(Department of Educational and Psychological Research, Stockholm School of Education)

Address : *Fack 100 26 Stockholm 34, Sweden*
(post) Ralambsvägen 7, VII

Director : *Torsten Husén, professor*

A. Historical

1. Year of foundation : 1956

2. On whose initiative was the institute founded ?

   Founded by an act of the Swedish Parliament, legislation submitted by the Government. The plans were worked out by a Governmental Committee.

3. What were the reasons, developments etc. that led to its foundation ?

   The needs for educational research related to practical school situations. To provide opportunity for students at the School of Education to participate in and to follow research and developmental work in education.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

   It is an institute connected to the School of Education. Professor and associate professor of the institute are members of the Stockholm University faculty of Social Sciences and perform teaching and supervision of graduate students at the University of Stockholm.

2. Do you have a directing, governing or advisory board ?

   None.

3. What divisions, sections, units etc., exist in your institute ?

   There is a permanent staff and additional staff assigned to the different research projects contracted to the Institute.

4. How far do you participate in the initial and/or further training of teachers ?

   Included in in the permanent staff of the institute are 10 full-time teachers in charge of teaching education. The professor and associate professor give only a few lectures to the teacher candidates.

5. Present size of staff :

		Full-time	Part-time
Total	63	45	18
Researchers		25	7
Teaching staff		10	-
Others		10	11

6. Total budget in Swedish Crowns :

1966/67	900,000
1967/68	1,250,000
1968/69	1,600,000

The budget does not include salaries for the permanent staff, which is paid directly by the School of Education.

The predominant sources of finance are National Government through the National Board of Education and the Social Science Research Council.

7. Main fields of research activity :

   Our research work is rather diversified but can be said to be oriented to school organisation and classroom work.

C. Major research projects reported in the academic years 1966/67 and 1967/68

Husén, Torsten (edit.) : *International Study of Achievement in Mathematics. A comparison of twelve countries.* Vol. I and II. Uppsala 1967.

Johannesson, Ingvar : *Effects of praise and blame. Results of the class teacher's incentives upon achievement and attitudes of school children.* Stockholm 1967.

Postlethwaite, Neville : *School Organisation and Student Achievement. A Study based on achievement in Mathematics in twelve countries.* Stockholm, 1967.

D. Major research projects in progress

D. 1. Independent work in the secondary school (SAG project)

Scientific leader : Assistant professor Sten Henrysson

Investigation leader : Esse Lövgren

Aims :

Briefly, the purpose of the project is :

- to evolve methods of instruction to develop students' ability to work independently,
- to define the demands which, when these methods are applied, may be made on the printed study material, particularly its general design, the components in the material and their functions,
- to make recommendations regarding the routine required for the production of such study material,
- to study the factors that affect students' attitudes to a large amount of independent work during normal lesson hours.

Design of the investigation

The following has been done in the project hitherto :

(a) a model has been designed for methods of instruction aiming at developing the students' ability to work independently,

(b) construction of study material,

(c) field studies to test the model instruction methods and study material, in which different methods of observation have been used.

Field studies made

Field studies have been performed in mathematics and history; in mathematics, however, at only one school in five classes. The IMU project has taken over the mathematics experiments in the gymnasium.

Field studies were made during the first year of the project at gymnasia at Arvika, Falkenberg and Karlstad. They were preceded and ended with various attitude formulae. Teachers and students were interviewed during the experiments. The work has been reported in the form of discussion minutes of student and teacher conferences at the different schools. The student questionnaires have been combined in a report with raw tables. A comprehensive report of the first year's work with the project will be made in the autumn of 1967. This will deal with the design of the study methods applied, the role of the teachers, features of the study material, etc., in relation to the burden of work for students and teachers, the students' school motivation, access to supplementary teaching and learning aids, the planning of the school premises and so on.

The field studies during the second year of the project, 1966/67, were also concerned with history and mathematics. The experiment was varied by concentrated studies in some classes being combined to make "large classes" with two teachers and instructed with the help of a "teacher's assistant" without teacher training.

The experiment has been followed up with observations of different kinds : reading tests, attitude formulae referring to attitudes to work at school, to the experimental subject and to study methods. The students' marks at the end of the previous year and the current school year have been collected. Numerous student and teacher conferences (nineteen conference days) have been held. Duplicated reports of student and teacher conferences are available. The other material will be processed during the third year of the project. The data will be used in attempts to explain the students' attitudes to the subject in which the experiment is made, and to the methods of work applied in this subject.

Field studies planned :

During the third year of the project, 1967/68, the mathematics experiment will be completed in five classes in the top form, in which three classes are combined to make a "large class" with two teachers and an assistant. Hermod's course in mathematics for the third year of the new gymnasium will be used.

Two second-year forms will study history with the help of study material to be prepared and tried out step by step in manuscript form. This material will provide the basis of the second part of "History on your own"

Two first-year classes will study history from the duplicated manuscript of "History on your own", part one.

Ten classes in the top form will study history (old curriculum) from the revised material mentioned above (written by Bergström-Hakansson, revised in the summer of 1967). Of these classes, six will be grouped to make two large classes.

A total of nineteen classes at Arvika, Falkenberg, Karlstad and Motala will take part in the field experiment during the third year of the project.

During the fourth and (presumably) last year, the study material in history ("History on your own", part one) will be tried out in a controlled experiment comprising a maximum of forty classes which will concentrate on the subject during the autumn term of 1968.

D. 2. Self-instructing material in English (UME)

Investigation leader : Carl Henrik von Mentzer, M.A.

Background and Aims :

The principal purpose of the project is to investigate how far instruction in foreign languages can be differentiated and made more efficient within the framework of the class by use of self-instructing material, and to study the consequences of such differentiation.

English in the seventh grade was chosen as the starting point of the experiment.

Differentiation of instruction must imply as far-reaching individualisation as is practically possible. The pupils must be activated to an extent corresponding as far as possible to their individual abilities, rate of work, interests and needs, and, naturally, also to the demands of the curriculum and the intentions of up-to-date language studies.

The aim of the project is to study whether such differentiation can be made possible by a completely planned co-ordination of different self-instructing or individualising media on the one hand, and on the other the direct instruction communicated by the teacher, as well as how learning and practice can most favourably be divided among

(a) the teacher's direct instruction and other learning situations,

(b) sections common to and differentiated for all pupils, and

(c) collective class instruction and group or individual work.

Thus the problem is to find the most adequate and individualising learning situation for each stage = "resource planning".

Design of the investigation :

Within the framework of the project, a method is to be developed and tested, as well as a complete material to suit the method. In the final phase, the material will be evaluated in order to find a base for an assessment of the quality and utility of the method. Among the variables to be studied in this phase may be mentioned :

(a) Learning effects

(b) Pupil motivation : English as a school subject

(c) Pupil motivation : method of work

(d) Degree of pupil activity (various learning situations)

(e) Training for study, reading habits, "English-mindedness"

(f) Teacher activity (qualitatively and quantitatively)

(g) Attitudes of teachers to method and material

(h) Administrative consequences (costs, planning of work, "return per unit of cost").

Work on the project can be divided into four phases :

(a) Mapping of problems and analysis of goals

(b) Developing a method (a methodological system)

(c) Construction of a complete material

(d) Study and evaluation of effects.

Timeplan :

The project was begun during the autumn term of 1965 and will be completed by 1970/71.

D. 3. Closed circuit TV in teacher training

Investigation leader : Dr. Jon Naeslund

Background and Aims :

One of the shortcomings of our teacher training often mentioned is the lack of integration between the various branches of teacher training. For trainees, it often seems that educational psychology is an isolated subject, instruction in methods another, without any relation to educational psychology, and practical training a third, with little connection to the other two. Many teachers employed at training colleges find this state of affairs very unsatisfactory, and there is no doubt that steps will have to be taken to attain better integration between the various items in teacher training. Among other things, endeavours have been made to make auscultations - i.e. study visits made by trainee teachers to various classes - more meaningful. To this end, the preparation for and discussion of the auscultations have been made more systematic, and the "guidance" on how to make observations made stricter.

Experiences of this kind have created a demand for technical aids, which can, in a more rational way, concretise educational-methodical theory and still tolerate the increase in the number of trainees expected at the schools of education.

It was with this in mind that the 1960 teacher training committee proposed that closed circuit TV should be used to a greater extent in future teacher training. Instead of sending trainees into classrooms to observe pupils, methods and material, the classroom will be taken via TV into the students' lecture rooms. By this it is anticipated that it will be possible to a greater extent to integrate instruction in teaching and methods with the practical training, and to make the trainees less dependent on supply of classes for demonstrations and auscultations. The last-named is of especial importance in case use is made of taped TV broadcasts.

Design of the investigation :

At the Göteborg, Malmö and Stockholm schools of education, TV institutes are already being created to bring about the concretion mentioned above.

The work should lead to the production of a series of video tapes for use in instruction in educational psychology and teaching methods.

This production should also be evaluated, partly by assessments made by an expert group of teachers engaged in teacher training, and partly by the students studying the programmes in question. In so far as is possible at the respective schools of education, systematic research may be carried on to a limited extent, primarily for the purpose of ascertaining the results of the TV instruction outlined here as compared with conventional instruction combined with auscultation. The work should also lead to a description of the most effective methods and routines.

D. 4. Methods of instruction in the subject of Religion (UMRe)

Scientific leader : Professor Torsten Husén

Investigation leader : Ingemar Fägerlind

Purpose :

To study how objective instruction in Religion, as required of the curriculum plans, can be realised in an educationally satisfactory way, and to design and evaluate methods of instruction.

Design of the investigation :

The work of the project may be divided into three main fields :

I A study of the problems, analysis of fundamental conditions, analyses of goals and methods.

II Development of demonstration model lesson plans.

III Testing, revision, and retesting of final material.

As far as possible the project will be restricted to problems pertaining to the Middle Department.

The following studies have been started during the first year of work on the project :

1. Historical analysis of the concept of objectivity in the teaching of the subject Religion.
2. Interest among students and teachers.
3. Practical instruction in the subject of Religion.
4. Maturation, parables and religion.
5. Studies of the literature.
6. Inventory and analysis of teaching aids.

In the second part of the project, model lesson plans of an objective nature will be designed for parts of the course, with the help of experts in the subject and methods. When these plans are being tried out, great attention will be paid to problems of maturity and the subject matter. In addition, an attempt will be made to ascertain which teaching aids are most suitable for different sectors, and how different teaching aids stimulate versatile student activity. The first trials will be made at the experimental and demonstration school attached to the Stockholm School of Education. A study will be made of student and teacher reactions to the instruction. A preliminary trial of the material is planned in schools outside the Stockholm region as well.

The third part of the project will be a trial of the revised material in a larger sample.

Time-table :

Most of the analytical studies will be completed during 1967/68. In 1968/69 the construction of model lesson plans for various parts of the course will be begun, as well as some testing and revision. 1969/70 : further revision and the development of material for the model lessons and large-scale testing. Final testing and production of material will be undertaken during the fiscal year 1970/71.

List of reports published in the project :

Marklund, B. (1967) : *Instruction in the subject of Religion in the Lower and Middle Departments of the Comprehensive School: - students' interest, and methods of instruction.* Stockholm School of Education (mimeographed). (In Swedish).

Marklund, B. (1968) *Interest in the subject of Religion in the Lower and Middle Departments of the Comprehensive School.* No. 29, May 1968 (mimeographed) (In Swedish).

Nilsson, I. (1968). *Objectivity and instruction in Religion - a historical analysis.* Stockholm School of Education (mimeographed). (In Swedish).

D. 5. Study of growth in young people aged 10 to 16 years

Investigation leader : Professor Yngve Norinder

Aims :

The primary purpose of the investigation is to collect material that will make it possible to ascertain how the accelerated physical growth of young people is reflected mentally in their personal relationships, achievements at school and general behaviour, for example. In addition to both individual and typical deviations, the differences in the growth of boys and girls will be studied during the investigation. In the last-named item, the best information can probably be obtained by comparing twins of different sexes, who have grown up together. Further, it is expected that a comparison of twins of the same sex, genetically equivalent and genetically different, will provide information on, for example, the genetical background of the rate of growth.

Design of the investigation :

The study was commenced in the spring of 1964, in Grade 3 of schools in thirty or so towns, but was then restricted to classes containing twins. For each twin one or two classmates of the same sex and born in the same month, or at least in the same quarter of the year, were chosen for comparison. In order to avoid attracting undue attention to the twins, the psychological-pedagogical tests were administered to all members of the classes containing twins.

The principal sample comprises 1,100 pupils ; twins (450) and their classmates(650) for comparison. The aim is to follow these pupils, by further investigation - both anthropometrical and psychological-pedagogical - from and including Grade 3 through Grade 9.

The standard sample consists of the other pupils in classes containing twins, i.e. rather more than 5,000 pupils. As the name implies, this material will be used mainly for the necessary standardisation.

The anthropometrical studies, which refer to twins and their classmates, will be made twice a year (in April and October) by school nurses. On these two occasions, information on body length and weight of the pupils and on the development of the secondary sex characteristics (according to special schemata) qill be obtained. Certain information about the state of health of the pupils and their home situations will be obtained through the school doctor and nurse.

In Grade 3, the psychological-pedagogical investigation comprised the following three main items :

(1) a graded judgment by teachers of the behaviour of twins and the comparative subjects in the lower classes,

(2) a test of concentration, attention and reserve of energy,

(3) standardised achievement tests of Swedish and mathematics.

These tests are used primarily to test the pupils' ability to assess their own achievements. The standardised tests set in Grades 6 and 8 will be used for the same purpose.

From and including Grade 4, some socio-metrical tests will be included, and from Grade 5 general intellectual tests. The teachers' judgments of pupils' behaviour will be required in Grade 7 and/or Grade 8. Concentration, attention and reserve of energy tests will, if possible, be repeated with the same pupils in Grades 4 to 9.

Time plan :

The investigation will be concluded during the academic year 1969/70, when the pupils are expected to leave the comprehensive school. Not until then will it become possible to begin processing the complete material, although some parts will be reported before then.

D. 6. International Project for the Evaluation of Educational Achievement (IEA)

IEA is an international non-profit making organisation for research in education. Its aim is to carry out systematic studies of the school performance of children in different countries. This will throw light on the way different education systems work; we can compare the influence on school work of different teaching methods, different curricula, different forms of school organisation, different parental attitudes, and so on.

Educational Research Centres from nineteen countries have joined together to form IEA. The countries are : Australia, Belgium, Chile, England, the Federal Republic of Germany, Finland, France, India, Iran, Israel, Italy, Japan, the Netherlands, Poland, Scotland, Sweden, Thailand, the U.S.A. and the U.S.S.R.

In our first stage, in which twelve of these countries took part, we compared achievement in mathematics. We took samples of children at different age levels, and compared them on specially constructed tests.

In order to explain some of the differences in doing mathematics between the children we also designed some special questionnaires :

1. A School questionnaire, about the organisation of the school ;
2. A Teacher questionnaire, dealing with the professional background of the mathematics teachers, and with the mathematics curriculum in their school ;
3. A Student questionnaire, which asked for information about the social background of each pupil, and his plans for the future ;
4. A Student Opinion Booklet, which deals with the student's attitudes towards mathematics and related issues.

Our findings were detailed and complex; they have been published in two volumes edited by Torsten Husén, *International Study of Achievement in Mathematics : A Comparison of Twelve Countries,* published by Almqvist and Wiksell, Stockholm, and John Wiley & Sons Inc., New York, 1967. They are a record of a unique piece of factual research, founded on the experience of twelve countries. Teachers, educators, and parents will find them a valuable factual base for making decisions about school reform.

We are now embarking on a second, more difficult phase of our enquiry. Following in the footsteps of our work with mathematics we are now studying *Science, French as a Foreign Language, English as a Foreign Language, Reading Comprehension, Literature, and Civic*

Education. There will be many new problems of test construction, translation and test refinement. Also, as before, we shall need questionnaires for schools, teachers and pupils, to help explain the differences in school performance which we hope to find. In addition, for Civic Education and for some other subjects, we are developing further methods for studying children's attitudes.

D. 7. Futurologic aspects on education

See Torsten Husén : *A case-study in policy-oriented research : The Swedish school reform* in The School Review, Vol 73, No. 3.

Lifelong learning in the 'educative society', in : Nat. Rev. Aff. Psychol. Vol. 17; No. 2.

Strategies of educational innovation, Working paper 38, International Conference The Role of the Teacher in Educational Change, 24 - X - 1968.

D. 8. From Ten to Thirty-six. A study of 1,500 careers as related to social background, education and IQ.

Responsible researcher : Professor Torsten Husén

Starting date : 1938

Probable completion date : End of 1968

Aims :

The main purpose of the project is to elucidate educational and occupational careers of a large group, all pupils in the third grade of all elementary schools in the city of Malmö 1938 (1,500 persons), in today's society. An investigation of prognostic value of school marks, social background etc., for these careers.

Procedure :

Data collected from registers, school records and from the entire population through questionnaire. Career data are related to different types of background information in correlation tables.

Conclusions :

Difficult to say. Included in the project is a special study of mentally retarded pupils, which may give some implications for special education. The results may also be helpful in discussions of grade repeatings, which does not seem to be of any positive value for the students in the population investigated. The results will further illuminate the importance of social background for both educational and occupational career. The report-writing is in progress, and the report will be published in July 1969 in Stockholm : Almqvist & Wiksel and in New York : John Wiley.

D. 9. Qualitative Evaluation of Teacher Training (KUL project)

Scientific leader : Dr Sixten Marklund

Investigation leader : Stefan Haglund

Purpose :

The purpose of the project is to illuminate the teacher training process from two main aspects. Partly it tries to establish to what extent the different training units reach the aims given in the curriculum plans for teacher training and partly how these stated aims correspond to the field criteria which can be regarded as the underlying principles for teacher training; Is in other words the teaching process relevant, seen against the demands of the teacher in his work. Both these aspects are integrated and can, in relation to one another, be regarded as a measurement of the total effect of the training.

Scope of project :

The investigation will be a longitudinal study of the candidates admitted in the autumn session of 1969 and spring session of 1970 (infant and junior school teachers) and autumn session of 1969 (secondary school teachers). During the autumn term of 1968 certain try-outs will be commenced. The groups in question will then be followed during the entire educational period. The investigation will continue for 5 - 6 years. After the training period the teachers will be followed up within a period of 2 years. The first part of the investigation will cover the total group of candidates. The follow-up study will be carried out on a sample. The main purpose of the first stage is to relate the educational process to the curriculum plans in relation to the field criteria.

Collection of data :

The candidates will be given several tests which measure personality and cognitive variables. Furthermore a close study of the social structure of the separate educational units will be carried out. The variables which will be studied are for example the situation and lay-out of rooms, staff, students, and student lodgings.

Timetable (Stage I) :

Tests are being constructed during the autumn term of 1968. Data concerning the students is being codified and the material analysed regarding the distribution of student material at the different teacher training units. During the autumn session of 1968 the influence of the quotation system on the distribution of students will be studied. The investigation will commence during the autumn session of 1969 and will continue until 1972. Owing to the character of the project adjustments of the time-table may be necessary. A report of stage I will be given during the session of 1972/73.

No. 7

Name of institute : ***PEDAGOGISKA INSTITUTIONEN***
(Institute of Education, Stockholm University)

Address : ***Gästrikegatan 10, Box 6033 Stockholm 6, Sweden***

Director : ***Arne Trankell***

A. Historical

- Year of foundation : 1937

B. Organisation and programme

- How far do you participate in the initial and/ or further training of teachers ?

  We do not participate at all in teacher training.

- Present size of staff :

		Full-time	Part-time
Total	40	25	15

All are teaching and doing research.

- Main fields of research activity :

  Socio-educational problems (change of society)
  Criminology, especially problems of treatment
  Immigration and immigrant and minority group problems
  Adaptation and adjustment
  Political problems
  Peace research problems
  Psychotherapy

C. Major research projects reported in the academic years 1966/67 and 1967/68

C. 1. Gudrun Seitz' barnpsykoterapeutiska metod - dess bakgrund, utvecklingen av dess hypoteser samt utvecklings- och inlarningspsykologiska paralleller till dessa. (Gudrun Seitz' method of child psychotherapy - its background, the development of its hypotheses and parallels to these from developmental psychology and learning psychology)

Researchers : Barbro Olofgörs and Ulla Sjöström

Bibl. ref : Olofgörs - Sjöström : *Barnpsykoterapi.* Pedagogiska skriftserien nr. 8 Liber, Stockholm 1968.

Purpose :

The purpose of this project has been to describe a method of child psychotherapy, investigate how it has been developed and look for parallels to its different aspects in developmental psychology and learning psychology. The method has been developed at Ericastiftelsen in Stockholm by psychologist Gudrun Seitz (died 1965). Ericastiftelsen is the centre for training of child psychotherapists in Sweden.

Procedure :

The procedure has been :

I. to describe the historical background of the method

II. to study everything Gudrun Seitz has written about her therapeutic work and try to make a reconstruction of the development of the different aspects of the method. The statements formed a number of clusters, which were considered to concern different aspects of the method. By studying these clusters the development of the method could be followed through different stages and comparisons with other methods could be made at special points. Finally a description of the method as a whole could be presented.

III. to illustrate the practical application of the method by describing the treatment of a child, where Gudrun Seitz had been supervisor and one of the researchers the therapist.

IV. to investigate whether the hypotheses, on the basis of which Gudrun Seitz worked, and which had been found as presented under II, get support from developmental psychology and learning psychology. For each aspect of the method data has been presented, which has been given by researchers from different theoretical bases and which show agreement with the experiences of Gudrun Seitz.

Conclusions :

The conclusions of this investigation are that this method of child psychotherapy has been developed by a dynamic application of what is now called "action cum research", and that it is a valuable and useful method. It is the hope of the researchers that the hypotheses, which have been found and presented here, will be productive for further research in this field.

The results of the project will be used in the education of psychologists, above all, child psychotherapists.

D. Major research projects in progress

Out of twelve major projects, the following six deal with educational problems.

D. 1. Ideologi och pedagogik, Studier i uppfostrans och påverkans målsättningsproblem (Ideology and education. Studies in the aims of education)

Researcher : Ola Andersson

Starting date : Autumn 1967

Probable completion date : Parts of the studies will, it is hoped be completed during 1969.

Purpose :

To demonstrate that education and other schemes for systematic influence of human behaviour and experience are guided by explicit or implicit commitment to different views of human nature and the nature of human society.

Procedure and methods :

Historical and comparative analyses of educational ideologies (in the broadest sense) and their consequences in educational policy and everday practice.

Anticipated explicit and implicit recommendations for changes in educational practice :

Since the problems of education have been discussed mainly as "educational practice", i.e. within a narrow framework and without a thorough consideration of the foundations of education, I hope that these studies will contribute to the realisation that all educational activities are expressions of basic philosophies regarding human life and society. I also hope that such a realisation and reconsideration of the bases of educational thought and activity will contribute to a deeper understanding of critical issues in education and to more adequate planning of educational change.

D. 2. Minoritetsgruppens dynamik. En studie kring minoritetsgruppsmedlemmars anpassningsprocess (The Dynamics of the Minority Group: A study of the adjustment process of the minority group member)

Researchers : Hans Gordon, Lennart Grosin.

Starting date : Spring 1965.

Completion date : Winter 1968/1969.

Purpose :

To create a psychosocial theory of the dynamics and functions of a minority group. The theory is building a base from which recommendations of how to reduce internal and external conflicts could be drawn. This implies a theoretical and empirical analysis of the functions within the group as well as an analysis of the group formation in relation to the surrounding society.

Procedure :

The population is Jews living in Stockholm, Sweden. A simple random sample has received tests measuring Jewish Identification, Jewish Authoritarianism, Jewish Self-Hatred and General Dogmatism. A group of Jewish Students have also got a test measuring Anti-Gentilism. Interviews are being held with several groups of Jews : Students, Religious Youths, Jewish Non-believers and so on.

The educational practice :

In Sweden there exists one Jewish day-school for children between 7 and 13 years old. Our results will possibly contain some implicit recommendations concerning the attitude formation about the child's minority status.

D. 3. Adjustment of school children

Researcher : John Blomqvist, University of Stockholm.

This study started about 10 years ago. It is planned to be completed in the Spring of 1969. About 3,500 sixth graders from 119 classes are included in this study.

Purpose :

The main purposes of the study are as follows :

(a) to work out a theory on school children's social and personal adjustment with previous research and contemporary theories of personality as starting points ;

(b) to work out methods for determining pupil's social and personal adjustment on the basis of the theory mentioned above :

(c) to describe pupils' adjustment by the methods mentioned above ;

(d) to study the interrelationship between adjustment and health -, personality- and social factors.

Procedures :

For determination of adjustment, measures of the following three main variables have been used :

(a) Behaviour adjustment the measure of which is based on different data from teachers, peers and from the pupil himself.

(b) Work-efficiency which is defined as the degree in which the pupil's school achievement comes up to the level expected in regard of his mental abilities.

(c) Peer-adjustment concerns the pupil's acceptance among opposite-sex and same-sex companions.

On the basis of these measures different Patterns of Adjustment have been obtained. Social as well as personal adjustment are assumed to vary between the different patterns. By finding out the pupil's Pattern of Adjustment we assume that it will be possible to make valid statements about the pupil's social and personal adjustment. It is hoped that our method of determining adjustment will be more suitable and satisfactory for determining personal adjustment among school children than what is the method with personality tests.

The results of the study of characteristics of pupils with different Patterns of Adjustment as to the following factors : abilities, interests, attitudes, physical health, mental health, and social factors, are i.a. supposed to be suitable for testing certain previously made assumptions concerning personal adjustment among pupils with different patterns of adjustment.

Educational Recommendations :

We do not plan to give any explicit recommendations for changes of the educational practices. But we hope that our theory as well as the results obtained will contribute to an increased interest in studying children's motivations and how fundamental needs best may be satisfied in school.

D. **4. En psykologisk och pedagogisk studie av förändringsprocesser i lärarnas arbete vid vuxenskolan för zigenare i Årsta gamla skola i Stockholm (A psychological and educational study of changing processes in the work of the teachers at the school for gypsy adults in Årsta, Stockholm.)**

Investigator : Per-Johan Ödman, Institute of Education, Stockholm University.

Starting date : September 1967

Probable completion date : December 1968.

Description of the project :

The main component of the project is an analysis of an arrangement with a group session activity for a team of teachers at the school for gypsy adults in Årsta, Stockholm. From October 1967 to June 1968 these teachers have been participating in weekly recurrent four-hour-sessions which have been tape-recorded and successively subject to analysis. As a psychologist with education as a speciality I was chosen as the leader of this group.

The purposes of the group activity have been : to create a therapeutic situation which gives the teachers an opportunity of discussing frustrations in their daily work, to increase the teacher's psychological and educational skill when practising his profession, to innovate the work of the teachers by planning new educational projects.

Purpose :

The purpose of my investigation then is to study the effects of the group activity on :

1. the teacher's own experience of himself and his work, its goals and methods,
2. the interaction between the teacher and his pupil,
3. the interaction between the teacher-pupil activities and the new goals of the school.

(From the beginning in 1965 the principal objective of the school for gypsy adults was to give them knowledges mainly in reading, writing and arithmetic. However, it gradually became evident, that this objective was far too limited.) A fourth and very important purpose of the project is to judge its value as a model for similar activities in other schools.

Procedure :

From the methodological point of view the most important thing is the kind of scientific approach chosen for this project. This can be summarised in one single term : action cum research. This research methodology have in a substantial degree been realised by Ingrid and Arne Trankell in their gypsy project in Stockholm (of which my own project is an integrated part). The main trait of this method is the conscious participating of the investigator in the process which he studies. He does not stand aside gazing at a bit of reality, trying to influence it by means of one or another independent variables. Instead he is involved in it. But at the same time he is functioning on a higher awareness level than the other actors in the process under study. Successively testing his hypotheses concerning the action of which he is a participating member he is ready to change his routes in a way that better approaches the goals of the action. This means that he is constantly accumulating and making use of information appearing during the process. The project with the teacher team at the gypsy school in Stockholm is a typical example of this method. As to procedures and methods in a more conventional sense they are to a certain extent defined by the group activity itself. The main method of influence on the teachers thus has been the continuous discussions and the comments around specified problems. As to the types of data-collection the tape-recording of all group sessions is already mentioned above. Furthermore, an interview with each teacher concerning his reactions to the group sessions and the other attempts to reform him and his school, was held after the closing of the school-year. Other data are interviews with some pupils and different reports from their teachers.

As to the applicability of the results and methods of this project on other educational fields there are of course yet many questions to be answered. But as it now seems they look quite useful even in other contexts, where a change in educational style and attitude is needed. And this is quite often the case in Sweden where the claim for democracy concerns practically all levels of education.

D. 5. A School Striving towards an Ideal Construction in its Organisational and Pedagogical Patterns

Researcher : Pratibha Rampal.

Starting state : December 1967.

Probable completion date : November 1968

Purpose :

(a) To study the organisational structure of Swedish Waldorf Pedagogics School (Kristofferskolan, Stockholm), its functioning and the process of decision making in the governing bodies of the school, especially when dealing with the outside world.

(b) The motivation of the parents of the children of Kristofferskolan in deciding to send their children to this school.

Procedure :

(a) Personal-unstructured-open interviews with the teachers of the school; the parents who either belong or have belonged to the Parents' Council (*Förälsearradet*); the producer of the film, 'En Skola', about the Kristofferskol in Stockholm, Sweden, which was shown on the Swedish television on February 21st and March 4th, 1968; and two members of the discussion group from the debate programme that followed the film when it was shown for the second time on March 4th 1968.

(b) A questionnaire sent out to the parents of the first three classes of Kristofferskolan.

D. 6. Gypsy Rehabilitation Project of Stockholm

Researchers : Ingrid Trankell and Arne Trankell

Starting date : January 1965

Probable completion date : January 1969

Purpose :

To work out through an "action cum research" procedure a programme of action to be taken by the local authorities of social welfare, child care, education and labour in Stockholm in order to facilitate integration in modern society of the Swedish gypsies.

Methods envisaged :

Observations, interviews, conversations during participant observer's work within the life of the gypsy population on which are worked out action programmes including social-curative work, family therapeutic treatment and varying kinds of individual support. Continuous checking of effects and modifications of the activities according to the experiences gained throughout the process.

Anticipations :

Already a number of important changes in the school for adult gypsies have taken place as a result of the work. The action cum research procedure implies a continuous chain of changes to take place under the supervision of the team of investigators and administrators working together. The innovation consists of the system of change-promoting co-operation established.

No. 8

Name of institute : ***OREBRO PROJECT UNIT***

Address ***Avd. for tillämpad psykologi, Psykologiska institutionen,***
Box 6801, 113 86 Stockholm, Sweden.

Director : ***David Magnusson, Associate Professor***

A. Historical

1 Year of foundation : 1964

2 On whose initiative was the institute founded ?

The present Director's

3 What were the reasons, developments, etc , that led to its foundation ?

The increasing personality problems of pupils.

B. Organisation and programme

1 Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

It is a sub-unit under the unit of applied psychology of the Psychological Laboratories of Stockholms Universitet. The Director is Head of this unit and Assistant Professor at the university.

2 Do you have a directing, governing or advisory board ? (Functions, bodies represented on it, etc.)

An advisory board with representatives of the National Board of Education, the local School authorities in Örebro, parents' association, teachers' associations, and the unit.

3 What divisions, sections, units etc , exist in your institute ?

None.

4. How far do you participate in the initial and/or further training of teachers ?

No further training of teachers.

5. Present size of staff :

		Full-time	Part-time
Total	11	4	7
Teachers	4	2	2
Researchers	7	2	5
(Students working with their theses in the project) :			6

6. Total budget in Swedish Crowns :

1966	130,000
1967	170,000
1968	200,000

7. Main fields of research activity :

Different aspects of adjustment at the age 10 - 20.

C. Major research projects reported in the academic years 1966/67 and 1967/68

None.

D. Major research project in progress

Studies of adjustment, behaviour and achievement - the Örebro project

Researchers : Assistant professor David Magnusson and Anders Dunér

Starting date : 1964

Completion date : 1975 - 78.

Purpose :

(a) Analysis of the factors that determine adjustment in the school situation in a broad meaning (satisfaction, social relations, achievement)

(b) Analysis of the relationships between adjustment in the school situation and adjustment later on in occupational training and work etc.

(c) Working out of models for early prediction of maladjustment and testing of programmes for prevention of the predicted development.

Procedures and methods :

Follow-up of the pupils of three grades of the comprehensive school in Örebro. The youngest children will be studied from grade 3, age 10, for 10 years. There are about 1,000 pupils in each grade.

(a) The groups are studied extensively in "screening-investigations" every two or three years, with a battery of methods : tests, questionnaires (pupils and parents), the semantic differential, ratings by teachers and class-mates.

(b) For special problems intensive studies with also individual methods are made on samples of children chosen a) on the basis of results from the screening studies so that they represent a special degree or type of adjustment or b) to fit the framework of a model for the study of a special problem

(c) In a sample physiological measures of brain activity, endocrinological activity and general physical ability are collected and related to data from the psychological studies

No. 9

Name of institute : **DEPARTMENT OF EDUCATION, UNIVERSITY OF UMEÅ**

Address : ***Axtorpsvagen, Umea, Sweden***

Director : ***Sten Henrysson, Professor***

A. Historical

1 Year of foundation : 1967

2 On whose initiative was the institute founded ?

Government of Sweden

3 What were the reasons, developments etc that led to its foundation ?

Training of students ; need of research on school problems

B. Organisation and programme

1 Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

It is connected with a university and a School of Education The department head is professor in both organisations

2 Do you have a directing, governing or advisory board ?

No

3 What divisions, sections, units etc , exist in your institute ?

No particular one

4 How far do you participate in the initial and/or further training of teachers ?

Training in Education at the School of Education in Umeå

5 Present size of staff :

		Full-time	Part-time
Total	11	6	5
Researchers	About 6 involved in research ; no-one engaged solely in research		

6. Total budget in Swedish Crowns :

1966	5,000
1967	5,000
1968	90,000

7. Main fields of research activity :

Physical Education, student characteristics

C. Major research projects reported in the academic years 1966/67 and 1967/68.

None, since the department is new.

D. Major research projects in progress

D. 1. Gymnastikundersökning (Survey on Physical Education in the Schools)

Head of project : Sten Henrysson

Others : Lars-Magnus Engström, Gudrun Hedberg and Björn Allergren

Starting date : January 1967 at the School of Education in Stockholm, when the Head of the Project was working there. Moved to Umeå August 1968.

Completion date : 1970

Purpose :

Give data on the curriculum in different parts of Sweden and the pupils' interest for different parts of the subject.

Procedure :

Surveys to teachers and pupils in grades 8 and 11.

Anticipated Conclusions :

A new curriculum better adjusted to the needs and interests of the pupils.

D. 2. Gymnasieprognosundersökningen (Prediction of success in the Gymnasium)

Head of the Project : Sten Henrysson

Others : Sven Jansson, Yngve Carlsten, Bengt-Olov Ljung

Starting date : January 1965 when the Head of the Project worked at the School of Education in Stockholm. Moved to Umeå August 1968.

Completion date : 1970.

Purpose :

Find out if prediction can be improved by adding aptitude and/or achievement tests to the school marks.

Procedure :

The traditional method used in research of this kind :

A follow up for 3 years of a sample of about 3,000 pupils tested in grade 9.

D. **3. Universitetsprognosundersökningen (Prediction of success at the University)**

Head of the project : Sten Henrysson

Others : Inga Slazman, Leif Lindberg

Starting date : July 1968

Completion date : 1969

Purpose :

Find out if prediction can be improved by adding an aptitude test to the school marks.

Procedure :

A follow up for one year on samples of 800 students in total.

D. **4. Multipel poängsättning av flervalstest (Multiple scoring of multiple choice tests)**

Head of the Project : Sten Henrysson

Others : Ingemar Wedman, Gerhard Nordlund

Starting date : September 1968

Completion date : 1969

Purpose :

Try out if the reliability and validity of a test can be improved by scoring distractors on multiple choice tests.

Procedure :

Try different methods of scoring on some tests used in grade 9.

No. 10

Name of institute : ***INSTITUTIONEN FOR PEDAGOGIK, UPPSALA UNIVERSITET***
(Institute of Education, Uppsala University)

Address : ***S : t Olofsgatan 12, 752 21 Uppsala, Sweden***

Director : ***Wilhelm Sjöstrand, Professor***

A. Historical

1. Year of foundation : 1909

2. On whose initiative was the institute founded ?

The Swedish Government and National Parliament.

3. What were the reasons, developments etc., that led to its foundation ?

The necessity of study of education for prospective teachers in secondary schools.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

Connected with Uppsala University; Professor, assistant professors and lecturers are members of the faculty of social sciences.

2. Do you have a directing, governing or advisory board ?

No.

3. What divisions, sections, units etc., exist in your institute ?

Formally none; in fact there are sections for

a) comparative and historical education

b) didactics

c) empirical research in educational psychology.

4. How far do you participate in the initial and/or further training of teachers ?

From the beginning of this academic year a course for prospective teachers in secondary schools has been moved to special "Teacher Colleges", but nevertheless a lot of prospective teachers study education at the university in order to get a better competence for their job. Some research work is carried on in the Teacher Colleges in the fields of didactics but all other research problems are taken up at the university institutes.

5. Present size of staff :

		Full-time	Part-time
Total	37	30	7
Professor		1	
Assistant professors		4	
Lecturers		12	4
Assistants		13	3

150 researchers (for Ph.D. - degree or licentiatexam)

6. Total budget in Swedish Crowns :

1968 about 2 million

Predominant source of finance : National government and foundations

7. Main fields of research activity :

Historical education, comparative education, didactics, different fields in educational psychology, adult education, education for deaf and for slow learners, the genesis of delinquency.

C. Major research projects reported in the academic years 1966/67 and 1967/68

We refer to bibliographies edited by the Swedish Council for Social Science Research, the National Board of Education, research report series from our institute and to Studia Scientiae Paedagogicae Upsaliensia

D. Major research projects in progress

Too many to be described but e g comparative research on textbooks, learning methods for deaf, the characteristics of pupils in adult education and special methods of teaching for this group

UNITED KINGDOM

ENGLAND AND WALES

PART I GOVERNMENTAL ACTIVITIES

I. FIELDS AND AGENCIES

Educational Research at national level covers broadly the following fields and is stimulated and/or carried out by the following agencies :

1. Research directed towards the formulation of policy and to specific administrative problems connected with education

The **Planning Branch of the Department of Education and Science**, Curzon Street, London, W 1, deals with the administration and management of the Department's programme of commissioned and supported research in the above field. A programme of research is drawn up by Planning Branch after consultation with other branches in the Department. A contract to conduct particular research is drawn up after negotiations between Planning Branch, appropriate branches of the Department and the Research Institute selected to carry out the research.

The Department has a **Research Consultant** to advise on projects. Advice is also available from **Her Majesty's Inspectors of Schools.**

2. Research and Development connected with the School Curriculum

The **Schools Council** for the Curriculum and Examinations, 160, Great Portland Street, London, W 1, commissions and supports research in this area. Since its inception in 1964 the Council has published a good deal of material in the form of working papers, curriculum bulletins, examinations bulletins and special reports.

3. Research and Development in Modern Languages

The **Committee on Research and Development in Modern Languages** was set up in October 1964 to examine the need for research and development in modern languages (including English as a second language) and in the teaching of these languages, to keep in touch with what is being done in these fields in Educational Institutions and elsewhere, and to make information readily available to interested parties; to advise on such proposals and suggestions as may be submitted to the Committee and, where necessary, to stimulate research and development.

4. Research and Development in Educational Technology

The **National Council for Educational Technology**. 160, Great Portland Street, was set up in 1967 and has included in its terms of reference the task of encouraging research and development projects in educational technology.

5. Universities and Research

The block recurrent grants allocated by the University Grants Committee are intended to ensure that the universities have adequate resources for their twin functions of teaching and research, which are regarded as complementary and so interwoven as to be inseparable, for administrative purposes. The U.G.C. does not therefore earmark any part of the grant as being for either teaching or research, and it remains for each university to decide for itself how to utilise the funds available to it.

Some of these funds are no doubt devoted to educational research, either within the university departments of education which are primarily concerned with pedagogy at all levels and in other departments where the content and method of teaching particular subjects at university level may be the subject of research.

6. Research into aspects of Education generally

The **Social Science Research Council**, State House, High Holborn, London, W.C.1, was set up by the Government in 1965 to encourage and support research in the Social Sciences. Educational Research is considered specifically by the **Educational Research Board** of the Council. Some educational research projects are supported jointly by the Social Science Research Council and the Department of Education and Science. For example, the Council has joined with the Department in promoting some 'action research' designed to show what are some of the best ways of giving support to children and their families in six Educational Priority Areas; five in England and one in Scotland.

7. National Foundation for Educational Research in England and Wales

The Mere, Upton Park, Slough, Buckinghamshire.

The NFER is an independent institution carrying out research work on behalf of the education service, principally local education authorities (who provide about half its income) and the DES. The latter makes an annual grant to the NFER and requests specific researches to be undertaken on its behalf.

II. FINANCE

Research Projects commissioned or supported by the Department of Education and Science are financed from funds in the Department's annual budget; private foundations (for example, Gulbenkian, Wolfson and Platt, Ford, Nuffield) contribute to the support of some projects. Similarly, other Government Departments, who have an interest in projects supported by the Department of Education and Science, contribute (for example the Department of Employment and Productivity and the Home Office).

The Committee on Research and Development in Modern Languages and the National Council for Educational Technology recommend projects for the Department to support from its funds for research.

The Schools Council support/commission research projects partly from funds allocated by the Department of Education and Science and partly from funds subscribed by Local Authorities.

The Social Science Research Council is wholly financed by the Government.

III. CO-ORDINATION AND CO-OPERATION

Educational Research Projects supported or commissioned by the Department are co-ordinated by consultative or "steering" committees made up of departmental staff, the Department's Research Consultant and/or Her Majesty's Inspectors of Schools, representatives from local authorities and researchers concerned with individual projects.

The various branches of the Department of Education and Science are kept in touch with the research programme and individual projects by consultation and negotiations at all stages between Planning Branch, officers of the branches concerned and where appropriate the research workers on particular projects.

The Department is represented by assessors on the Schools Council, the Committee for Research and Development in Modern Languages, the National Council for Educational Technology and on the Educational Research Board of the Social Science Research Council.

IV. INFORMATION

The Planning Branch of the Department of Education and Science produces lists of current and completed research as well as summaries containing a brief description of projects, details of cost and names of researchers. These documents are intended primarily for Government use.

The **Social Science Research Council** produces a booklet giving details of projects it is supporting. The Council also produces a Newsletter three times a year for social scientists and for those who make use of their research.

The **National Foundation for Educational Research** produces a register of research. Regular publications include the Foundation's Journal **Educational Research** and **Technical Education Abstracts** but, in addition, research reports other than those of NFER projects, bibliographical items and high-level surveys of research are published at frequent intervals.

The **Centre for Information on Language Teaching**, State House, 63, High Holborn, London, W.C.1, which is maintained by annual grants from the Department of Education and Science, Scottish Education Department and the Ministry of Education, Northern Ireland, publishes a quarterly journal of abstracts of papers and articles concerned with research and language teaching ("Language-Teaching Abstracts", Cambridge University Press) and maintains a register of current research covering all disciplines which may contribute to the improvement of language teaching.

V. DISSEMINATION AND APPLICATION

There is constant development in the arrangements made for transmitting to teachers new methods and techniques. New methods and techniques including those deriving from the **Schools Council's** wide ranging programme of development and testing are transmitted to teachers through publications, through the work of the teachers' centres, and through in-service training courses organised by Local Authorities, the Department of Education and Science, the Universities, Colleges of Education and a number of independent bodies.

The **National Council for Educational Technology** is responsible for the collection and dissemination of information about experience with existing audio-visual aids and media and about new developments and research projects.

The **Centre for Information on Language Teaching** acts as a bridge between research and teaching and aims at keeping in the closest touch with the practical needs of teachers at all levels.

There is collaboration between the **Department**, the **Local Authority Associations** and **Research Institutes** (National Foundation for Educational Research and University Departments and Institutes of Education). There is also contact at local level between Local Education Authorities, schools, and teachers and the University Departments and Institutes of Education.

NOTE ON FORESEEABLE DEVELOPMENTS

A number of bodies concerned with educational research (for example, the Committee on Research and Development in Modern Languages, the National Council for Educational Technology, and the Educational Research Board of the Social Science Research Council) are of recent origin and it is unlikely that the structure of Educational Research at national level will be altered for some time to come.

Name of institute :	***NATIONAL FOUNDATION FOR EDUCATIONAL RESEARCH in England and Wales***
Address :	***'The Mere', Upton Park, Slough, Bucks., England.*** ***79 Wimpole Street, London, W1M 8EA, England***
Director :	***Stephen Wiseman M.Ed., D.Sc., Ph.D.***

A. Historical

1. Year of foundation :

   Established 1946, under the administrative supervision of the University of London; and became a separate, self governing body on the 1st April 1947.

2. On whose initiative was the institute founded ?

   Local Education Authorities, Educational and Teaching Associations, Universities and similar bodies

3. What were the reasons, developments etc. that led to its foundation ?

   The establishment of a special research fund, derived from voluntary sources, during the immediate pre-War period, and the impetus given to educational research by the provisions and aspirations of the 1944 Education Act.

B. Organisation and programme

1. Is yours an independent institute or is it affiliated to or connected with a university, faculty (department) or another organisation ?

   An independent institute.

2. Do you have a directing, governing or advisory board ? If so, what is its composition and what are its functions ?

   The governing body of the N.F.E.R. is the Annual General Meeting of Members which deals with general policy and certain other matters. The Foundation's Board of Management, which is composed of representatives of the different types of Member Organisations, has full powers to conduct the business of the Foundation between General Meetings.

3. What divisions, sections, units etc. exist in your institute ?

   Numerous Research Projects; Statistical Services; Test Services; Test Agency; Information Service; Editorial Service.

4. How far do you participate in the initial and/or further training of teachers ?

   No participation.

5. What is the size of your staff :

	Full-time	Part-time
Total	145	9
Research	61	1
Administrative	14	3
Clerical	70	5

6. Total budget :

1966/67	£277,756
1967/68	£362,000
1968/69	£467,000

	1966/67	1967/68	1968/69
Percentage income from Members' Subscriptions	23.1%	18.3%	27.4%
Grants in Aid, Dept. of Education & Science	7.3%	2.8%	2.1%
Payments for various projects sponsored by the Department of Education & Science, the Schools Council, the Home Office, other public bodies and private Foundations	40.7%	47.5%	42.0%
Test Construction, Receipts and Royalties on Test Sales	25.6%	24.3%	21.6%
Publications and Sundry Receipts, Investment Interest etc.	3.3%	7.1%	6.9%
	100.0%	100.0%	100.0%

7. Main fields of research activity :

Streaming in Junior Schools
Comprehensive Education Project
Educational Environment (Constructive Education Project : Pre-School Project; The Educational Progress of Immigrant Children)
Communications Research (The French Project : Survey of Socio-Linguistic and Psycho-Linguistic Research)
Teachers and Teacher Education
Reading Research
Technical and Further Education, and Vocational Guidance
National Surveys
Examinations and Questionnaire Research
Mathematical and Conceptual Studies

C. Major Research projects completed in the academic years 1966/67 and 1967/68

C. 1. Survey of Methods of Teaching Arithmetic

Researcher : J.B.Biggs

Total amount of time spent on project : Experimental work 1959, with later analysis and report writing (2nd report, 1967)

Bibliographical reference of publication :

Biggs, J.B. *Anxiety, Motivation and Primary School Mathematics*, London, N.F.E.R., 1962 (N.F.E.R. Occasional Publication series, No. 7)

Biggs, J.B. *Mathematics and the Conditions of Learning*, Slough, N.F.E.R. 1967 (N.F.E.R. Research Reports, Second Series, No. 2)

Purpose :

To survey methods of teaching arithmetic in a sample of primary schools, and to assess pupils' attainment and attitudes.

Procedure/Methods :

Questionnaires on teaching practices, administration of test battery to pupils in their third Junior year.

Conclusions :

(a) Teacher ability seemed to be generally more important than methods.

(b) Analogical methods were found to be especially helpful only with boys of high intelligence.

(c) Analogical and motivational methods proved more useful than traditional methods, when used remedially.

(d) The abstractive method proved generally superior to others, and favoured especially the dull and backward.

(e) Girls showed poorer attainment and higher number-anxiety when first introduced to the abstractive method, but later improved to surpass the control group.

Dissemination of conclusions :

Publication of Reports.

C. 2. Survey of In-Service Training in three Counties

Researcher : B.S. Cane

Starting date : September 1967

Completion date : Field-work completed, report to be published early in 1969

Purpose :

To establish the views and preferences of teachers and Heads, on aspects of In-Service training, and to investigate the extent of provision for In-Service training.

Procedure/Methods :

Administration of Questionnaires revised following Pilot Study.

Conclusions :

To be reported.

Dissemination of conclusions :

A Report is to be published.

C. 3. The Twickenham follow-up study : the Evaluation of Criteria of Secondary success

Researchers : B.H. Carlton and T.E. James

Total amount of time spent on project : 1964 to 1967

Bibliographical reference of publication : *The Evaluation of Criteria of Secondary School Success : Supplementary Findings relating to the Twickenham Follow-up Studies* by T. E. James. To be published.

Purpose :

To ascertain whether the trends and results reported in the Foundation's report *Admission to Grammar Schools* (Yates and Pidgeon, 1967) are verified by later performance, and to discover whether the criteria then used are valid in the light of pupils' further progress.

Procedure/ Methods :

Further follow-up testing programme.

Conclusions :

The findings of the earlier investigation are amply confirmed, particularly as regards the reliability of teachers' estimates when suitably scaled.

Dissemination of conclusions :

The Report on this project is to be published in *Educational Research.*

C. 4. A Survey of Medical Students

Researcher : Mrs. E.M. Kaneti-Barry

Duration of project : August 1966 - April 1967

Bibliographical reference of publication : *Survey of medical students in 1966. Summary Report.* In : Royal Commission on Medical Education (1968). Report. (Appendix 19) London : H.M.S.O.

Purpose :

To collect data on the home and educational background of medical students, their reactions to the medical course and college staff, and their future plans, and to detect developments and trends on medical student populations.

Procedure/ Methods :

Preparation, administration and analysis of questionnaires.

Conclusions :

Report submitted to the Royal Commission on Medical Education.

Dissemination of Conclusions :

A summary Report is available (see above).

C. 5. A Comparison of Block and Day Release

Researcher : B.M. Moore

Duration of project : 1962 - 1967/8

Bibliographical reference of publication : Report to be published early in 1969.

Purpose :

To compare the effectiveness of Block and Part-time Day Release systems.

Procedure/Methods :

To study the effectiveness of both systems, in the education of apprentices and technicians following courses in mechanical engineering. All members of the sample were tested on certain abilities and aptitudes, and on attainments. Students also completed questionnaires dealing with aspirations, background and environment. Principals and College staffs, personnel and training officers, and apprentice supervisors, completed questionnaires and were interviewed.

Conclusions :

Methods of implementing Block Release systems vary considerably throughout the country, and selection affects the quality of apprentices going forward to Block Release as against Day Release. These factors raise serious implications for the Planning of further education especially for the less able student.

Dissemination of conclusions :

Report to be published (see above).

C. **6. Studies of children's reading standards and progress in relation to their individual attributes, home circumstances and school conditions (a series of interlinked projects)**

Researchers : J.M. Morris and B.S. Cane

Duration of project : Field work 1959-61, with some extension to 1964; Analysis, Report-writing terminating 1966/7.

Bibliographical reference to project : Morris J.M. *Standards and Progress in Reading.* Slough N.F.E.R. 1966

Purpose :

To examine in detail some suggestions deriving from a previous enquiry (*Reading in the Primary School,* Morris, 1959) and to follow-up the progress of a sample of good and poor readers through the secondary schools.

Procedure/Methods :

A continuing programme of testing, case-study and observation.

Conclusions :

Many findings. The reading difficulties of children who are poor readers at age 8+ tend to persist to the end of their primary course, and affect their secondary school placement. Most have a greater number of personal handicaps than the average, and home circumstances tend to be unfavourable. The poorer readers tended to have less skilled teaching, and less favourable school conditions than their average or more able counterparts.

Dissemination of conclusions :

Reports have been published (see above) and a pamphlet for teachers *The Challenge of Reading Failure* has been issued.

C. 7. National Survey of Mathematics in Secondary Schools in England

Researchers : D. A. Pidgeon and B. Choppin.

Duration of project : Testing Programme 1964, analysis in subsequent years and report 1967.

Bibliographical reference of project : Pidgeon D. A., ed. *Achievement in Mathematics : a national study of Secondary Schools.* Slough, N.F.E.R., 1967 (Research Reports, Second Series)

Purpose :

To extend the work carried out in England for the International Project for the Evaluation of Educational Achievement (first phase - mathematics) into a National Survey of Secondary school mathematics in this country.

Procedure/ Methods :

A programme of testing and questionnaire administration, with subsequent analysis.

Conclusions :

Various (a survey research)

Dissemination of conclusions :

A report has been published (see above) and a pamphlet for teachers is in prospect.

C. 8. The C.S.E. Comparability Research

Researcher : L.S. Skurnik

Starting date : 1965

Completion date : 1968

Purpose :

To discover the degree of agreement in grading standards between Regional C.S.E. Boards ; to explore various methods for calibrating examination grades ; and to look into relevant problems of examining.

Procedure/ Methods :

In the first phase of the project, a random sample of G.C.E. and C.S.E. schools was asked to forecast the grades expected of their pupils sitting 'O' level or C.S.E. examinations in six subjects, and a test of academic ability was given to a sample of these and other students aged between 13 - 15 years. Scores were compared with grades forecast and received, and the study reported in *The C.S.E Monitoring Experiment* (London, H.M.S.O., 1966. Schools Council Working Paper No. 6).

Similar studies with large samples, but with a different multiple-choice reference test, were conducted for 1966 and 1967. Reports on both studies are to be issued as Schools Council publications. A short report *Highlights of 1966 C.S.E. Monitoring Experiments* has been published (1968) by the Foundation.

Other research concerned with problems of examining has included : A follow-up survey of the later occupational plans of examinees ; a cross-moderation study ; the assessment of craftwork subjects ; the attainment of pupils in overseas schools ; a survey of Heads' practices and policies as regards the C.S.E. and G.C.E.

Conclusions :

Grading Standards : The main conclusion has been, in reports so far published, that the Grades as given by examining boards have had national currency and validity.

Dissemination of conclusions :

Publication of reports designed for varying types of educational readership.

D. Major research projects in progress or under consideration

D. 1. Research into Streaming and other forms of Grouping in Primary Schools

Researcher : Mrs. J.C. Barker Lunn

Starting date : 1963

Probable completion date : 1968. Final report for publication in 1969.

Purpose :

To compare the educational attainment and social development of children in large schools which are either deliberately streamed or non-streamed.

Procedure/Methods :

The design of the research includes :

(a) a survey of existing methods of school organisation based on a stratified random sample. Reported in *The effects of streaming and non-streaming in Junior Schools : Junior schools and their type of organisation - First Interim Report,* New Research in Education, Vol. 1., 1967.

(b) a comparative study of matched pairs of streamed and non-streamed schools ; consisting of a cross-sectional and a longitudinal study. The cross-sectional study has been reported in *The effects of Streaming and Non-streaming in Junior Schools - Second Interim Report,* New Research in Education, Vol. 1., 1967.

(c) an intensive study carried out in six of the schools involved in the longitudinal study.

In assessing the outcome of streaming or non-streaming, attainment attitude scales and a sociometric device are being used. Many important independent variables are being investigated. Papers deriving from the Project are to be published.

D 2. The Streaming Project : - a follow-up study

Researcher : Mrs. J.C. Barker Lunn

Probable Starting date : November 1968

Probable Completion date : 1970

Purpose :

To follow the progress of children studied in the Streaming Project, into their Secondary Schools, to obtain information on later achievement and on the development of attitudes and to complete case-histories.

3

Procedure/Methods :

The sample is of 2,000 children in a group of Junior Schools from the earlier longitudinal 'Streaming' Study. A comprehensive pupil testing programme is to be given at the end of their second year in secondary school; case study is to continue.

D. 3. Further statistical Analysis of Data from the Streaming Project

Researcher : Mrs. J. C. Barker Lunn
Starting date : October 1968
Probable completion date : March 1970

Purpose :

To investigate :

(a) the effect of length of schooling and date of birth on achievement
(b) the importance of different variables for schooling success
(c) factors in the development of favourable attitudes to school
(d) creativity and gifted children.

Procedure/Methods :

Analysis of data already collected during the course of the streaming project.

D. 4. Streaming in Primary Schools : The small Schools Project

Researcher : Mrs. J. C. Barker Lunn
Starting date : 1965
Probable completion date : 1967 - Report 1969

Purpose :

To investigate the problems of grouping in small Junior Schools. A report *Too small to Stream : a Study of Small Junior Schools* is to be published early in 1969.

Procedure/Methods :

Comparison of matched pairs of small schools using contrasting methods of organisation.

D. 5. Plowden Follow-up Study

Researcher : Mrs. M. Bartonova
Starting date : September 1967
Probable completion date : September 1969.

Purpose :

To follow up the original Plowden National Survey sample of 3,000 pupils from junior and infants schools. This will enable assessment of the importance for pupil progress and development of parental attitudes and other variables relative to the findings of the earlier survey.

Procedure/Methods :

These comprise structured interviews, by the Government Social Survey, with parents at home; and the administration by the N.F.E.R. of three cognitive tests to pupils, and three questionnaires (to pupils, teachers and head teachers). Together these will give information about home background, pupil capabilities and personality and the schools concerned, with particular reference to the relations between home and school. Data collection has been completed Analysis will include use of multiple regression techniques.

D. 6. The French Project

Researcher : Mrs. C Burstall
Starting date : 1964
Probable completion date : 1975

Purpose :

To evaluate the Pilot Scheme for the teaching of French in Primary Schools. Some principal areas of enquiry are : the effect of the introduction of French on the level of general attainment; the assessment of level of achievement in French, with particular reference to the performance of low-ability children; the influence of attitudinal factors; and the organisational and teaching problems posed by the introduction of French, including those of teaching in small rural schools.

Procedure/Methods :

For the purpose of evaluation, schools taking part in the Pilot Scheme have been divided into three groups, according to their size, type and history of French teaching. The original design provided for the testing of two cohorts - these comprising children whose ages fell within defined limits on 1st September 1965. In September 1968 testing was extended to a third cohort of 6,500 children, the majority being eight years old on September 1st 1968. The progress of the third cohort will be followed through to the end of their second year of secondary education in 1973, and comparison will be possible between this and the second cohort. New tests of unusual design have been produced for this project.

The findings to date have been reported in a first interim report published in *New Research in Education,* Vol. I. 1967 and in *French from Eight : A National Experiment* (N.F.E.R., 1968). Further interim Reports are planned for 1972 and 1974. A Final Report on the secondary phase of the research is due in 1974.

D. 7. Survey of sociolinguistic research

Researcher : Mrs. C. Burstall
Starting date : 1967
Probable completion date : December 1968

Purpose :

To survey socio-linguistic and psycho-linguistic research and to produce a review of this research which will be of value to language teachers.

D. 8. The Teacher and Educational Research

Researcher : B.S. Cane
Starting date : July 1967
Probable completion date : 1968. Report in preparation

Purpose :

To investigate :

(a) What is seen by teachers to be relevant educational research

(b) What value is attached by teachers to results so far achieved by educational research, and

(c) What kinds of further research would, in their view, be most valuable.

Procedure/Methods :

Preparation and administration of questionnaires.

D. 9. Teaching Beginners to Read

Researchers : B.S. Cane and E.J. Goodacre

Starting date : 1959

Probable completion date : 1968/9

Bibliographical reference : Two reports by E.J. Goodacre have been published : *Reading in Infant Classes,* and *Teachers and their Pupils' Home Background,* published in 1967 and 1968 by the N.F.E.R. The third and final report by B.S. Cane is expected in early 1969.

Purpose :

To discover the extent and nature of the task of teaching beginners to read, and to study the relations of the reading attainment and progress of infants to their individual attributes, home circumstances and school conditions.

Procedure/Methods :

(a) A survey of methods, materials and problems in 100 infant schools.

(b) A longitudinal study, over two years, of some 3,000 children, to provide information on reading readiness and attainment, children's home background and personality traits.

D. 10. The Teaching Day

Researcher : B.S. Cane

Starting date : Spring 1968

Probable completion date : 1971

Purpose :

To record and analyse the various activities which a teacher has to undertake in the course of his professional work in and out of school.

Procedure/Methods :

Classroom and School observation by independent observers. Recording of out-of-school activities by the teachers concerned.

This project has been preceded by a Feasibility Study now completed.

D. 11. The Educational Progress of Immigrant Children

Researcher : Miss J.M. Haynes

Starting date : January 1967

Probable completion date : 1970

Purpose :

To devise tests of learning ability for administration to immigrant children, which will enable teachers to know how much progress to expect from these children.

Procedure/Methods :

Experimental tests will be validated against measures of attainment, over a period of two years. The performance of children will be related to their scores on intelligence tests, to their emotional and social adjustment, and to factors in family and school background.

D. 12. Constructive Education Project

Researcher : J. McNally

Starting date : 1965

Probable completion date : 1972/3

Purpose :

To investigate those factors in the organisation and life of a school which may affect the attitudes, behaviour and attainment of pupils.

Procedure/Methods :

The first phase of the project involved the administration and analysis of a questionnaire sent out to over 600 schools. Later stages involve the production and testing of research instruments and their use in a sub-sample of schools, and action research in selected schools. In the action research, there will be two approaches - one concentrating on the school itself, and second on the school and its neighbourhood, parental and social service contacts, etc. An Interim Report on Phases I and II is due early in 1969.

D. 13. Research into Comprehensive Education

Researcher : T.G. Monks

Starting date : September 1965

Probable completion date : 1971

Purpose :

To investigate the various methods of organising and running comprehensive schools in England and Wales.

Procedure/Methods :

The first stages of the research consist of two fact-finding surveys, the first aimed to give an overall picture of comprehensiveness in secondary education, and the second to give a more detailed but still largely factual study of a sample of schools. An abstract from the Foundation's report on the first survey was prepared by the Foundation and published by the Department of Education and Science as No. 36 in the series *Reports on Education.* A full report on the first two stages of the project was published by the Foundation in

October 1968 (Monks, T.G. *Comprehensive Education in England and Wales* N.F.E.R.). Following meetings of teachers, administrators, philosophers, sociologists and research workers, a statement of the aims and objectives of comprehensive education in cognitive and non-cognitive areas was produced for the guidance of research workers at the Department of Education, University of Manchester, who are devising instruments to measure these objectives. Such measurement will play a crucial part in the third 'evaluation' stage of the research programme.

D. 14. Educational and Vocational Guidance

Researcher : B.M. Moore

Starting date : Spring 1968

Probable completion date : 1971

Purpose :

To assess the needs among careers teachers and counsellors in secondary schools for objective aids in guidance, and to develop tests, inventories, questionnaires, etc., where possible.

Procedure/Methods :

Initially a survey of main problems and requirements of careers teachers and counsellors working with the 13 - 18 years age group and an appraisal of existing tests, instruments and devices. Guidance instruments will be developed in relation to the problems and needs discerned.

D. 15. Further Education - Technical Colleges Research

Researcher : B.M. Moore

Starting date : 1960

Probable completion date : 1967/68 (Report for publication in early 1969)

Purpose :

A study in three Colleges of Further Education, aimed to assess those factors of ability, attainment, interest, attitude and socio-economic background, which seem to contribute to the progress of students in their chosen courses and careers. Considerable attrition and wastage of the sample has occurred ; the details have been carefully studied. The implications for test validation and educational/vocational guidance have been examined.

D. 16. International Project for the Evaluation of Educational Achievement - Phase II

Researchers : D.A. Pidgeon and B. Choppin

Starting date : 1967

Probable completion date : 1970 (field work), 1971-2 (analysis and reporting)

Purpose :

An investigation of attainment in six subject-areas - Science, English and French as Foreign Languages, Civic Education, Reading Comprehension and Literature. (The investigation in England will be of attainment in five sub-ject areas only (i.e. omitting 'English as a Foreign Language')).

Procedure/Methods :

The Foundation will use the occasion of the international programme, for the mounting of a national survey in 1970.

D. 17. The Problems of Overseas Students

Researchers : A. Sen and B. Cane

Starting date : 1964

Completion date : 1966/67. Follow-Up Study, 1967/68.

Bibliographical reference of publication : Report for publication in 1969, in the Foundation's Research Report series.

Purpose :

To investigate the English attainment, personal and educational adjustments of non-European students pursuing courses of Further Education in Britain.

Procedure/Methods :

Administration of an English test and questionnaires to some 3,000 students. In a second stage, a sample of students were interviewed.

The Follow-Up Study has elicited data on students' final performance, together with further information from institutions. Analysis has been designed to relate variables to success/failure in the final examinations.

D. 18. Attitudes towards Science

Researcher : L.S. Skurnik

Starting date : 1966

Probable completion date : December 1968. Report in Preparation.

Purpose :

(a) To identify the variety of attitudes held by secondary school pupils towards the many facets of science.

(b) To develop reliable and valid questionnaires or scales to assess these attitudes.

(c) To evaluate the extent to which these attitudes relate to other relevant variables (e.g. age, sex, personality).

Procedure/Methods :

The construction, administration and revision of a questionnaire; followed by the subjection of results to factor analysis, and the establishment of norms. Finally, the testing of various hypotheses about secondary school pupils and their attitudes to science.

D. 19. The Item Bank Project : A Pilot Study

Researchers : L.S. Skurnik and R. Wood

Starting date : 1965

Probable completion date : 1968

Purpose :

A pilot study concerned with procedures for the formation and operation of an 'Item Bank' - a 'bank' of test questions of known difficulty and predictive validity.

Procedure/Methods :

Blueprints and items have been prepared, at C.S.E. level, in mathematics. Items have been administered to C.S.E. candidates in a number of schools, and samples compared with C.S.E grades awarded to candidates.

A report is to be produced in early 1969.

D. 20. Research into Examining

Researcher : L.S. Skurnik
Probable starting date : 1968
Probable completion date : Not known

Purpose :

To study problems of examining.

Procedure/Methods :

Derived from present studies.

D. 21. Pre-School Project

Researcher : H.L. Williams
Starting date : April 1969
Probable completion date : 1971

Purpose :

To reduce failure in school by introducing into some nursery schools maintained by local authorities a programme of compensatory experiences aimed at modifying influences of home background unfavourable to success at school.

Procedure/Methods :

In this research, commencing in April 1969, structured and unstructured activities will be introduced into schools in order to remedy backwardness in language and perceptual development. The project will seek feasible means of involving parents in its programme. Three experimental and two control schools will be involved. A battery of three tests will be given at an early stage to two hundred children, comprising successive cohorts of leavers from five nursery schools. Test scores will measure attainment on leaving and enable this to be related to later progress assessed in a follow-up. They will also assist comparison between 'treated' and 'untreated' schools and obtain feedback for modifying the intervention programme.

The programme may later be extended to other schools.

D. 22 (a) Feasibility Studies of Conceptual Processes
(1) Concept Formation and the Design of the learning environment

Researcher : J.D. Williams

Starting date : Autumn 1967

Probable completion date : Not known

Purpose :

To investigate ways in which characteristics of the design of learning apparatus relate to operational characteristics which might be expected to influence its utilisation in the development of certain kinds of concept.

D. 22 (b) Feasibility Studies of Conceptual Processes - (2) The Dynamics of Creativity

Researcher : J.D. Williams

Starting date : Autumn 1967

Probable completion date : Not known

Purpose :

To reveal some of the variables that operate in the learning of 'materials' (e.g. vocabulary) and techniques to influence the subsequent utilisation of these in solving problems.

Procedure/Methods :

Investigations pursued under the Feasibility Studies may be replicated by teachers using a specially prepared 'Teachers' Research Kit'.

D. 23. Methods of teaching Arithmetic : Experimental Study

Researcher : J.D. Williams

Starting date : 1961

Probable completion date : 1968

Bibliographical references : Short Interim reports have appeared in : *N.F.E.R. Mathematics Research Bulletin,* Nos. 1 - 3. Two reports on the experiment will appear in the Foundation's *Research Reports, Second Series,* 1969.

Purpose :

To study, in a more intensive fashion than a survey would permit, how certain structural methods of teaching arithmetic compare with one another and with more abstract methods.

Procedure/Methods :

Comparisons of experimental and control groups, using two experimental designs ('Internal' and 'External'). The testing programme included arithmetic tests of various types, attitude scales and questionnaires. Information on the teaching situation was obtained by questionnaires and visits.

D. 24. The Modern Mathematics Study

Researcher : J.D. Williams

Starting date : 1967

Probable completion date : Not known

Purpose :

To evaluate the effects of teaching 'Modern-mathematical' topics in the Primary School.

Procedure/Methods :

(a) A 'Product' evaluation, studying the changes in pupils' test performance in computation, problem-solving, mathematical understanding, intelligence, 'reflective thinking' and 'learning sets'.

(b) A 'Process' evaluation studying the ways in which the 'modern-mathematics' learning process operates

UNITED KINGDOM

NORTHERN IRELAND

PART I GOVERNMENTAL ACTIVITIES

Research directed towards the formulation of policy and to specific administrative problems connected with education.

The Ministry of Education for Northern Ireland does not have a continuing programme of commissioned and supported research such as that for which the Planning Branch of the Department of Education and Science is responsible. The limiting factors are, of course, need and the resources available. The requirements of the area are in the main met by a statutory committee - the **Advisory Council for Education**, and ad hoc committees such as the Lockwood Committee on Higher Education.

On such matters as the development of statistics and records, the Ministry is in close liaison with the Department of Education and Science and a number of projects are progressing on a United Kingdom basis.

Northern Ireland also benefits from projects, such as Nuffield Mathematics and Science, which have the support of private foundations and importance is attached to the communication to teachers of new techniques and methods.

PART II ACTIVITIES OF EDUCATIONAL RESEARCH INSTITUTES

Name of institute : **NORTHERN IRELAND COUNCIL FOR EDUCATIONAL RESEARCH (N.I.C.E.R.)**

Address : ***18 Windsor Avenue, Belfast, BT9 6EF.***

Address of Research Unit : ***7 Lennoxvale, Lower Malone Road, Belfast, BT9 5BY***

Chairman : ***The Very Rev. W.A.A. Park, M.A., D.D.***

Secretary/Treasurer : ***J. McGilton, B.A., M.Ed., Ph.D.***

Research Officer : ***J.A. Wilson, B.A., M.Ed.***

A. Historical

1. Year of foundation : 1963

2. Founded on the initiative of the Association of Northern Ireland Education Committees.

3. Aim : To co-ordinate and initiate educational research.

B. Organisation

1. Independent, but operates an independent Research Unit in Queen's University, Belfast, under the direction of the Research Officer, who is an honorary Research Fellow of the University.

2. The Council consists of :

Association of Northern Ireland Education Committees	- 10 members
Teachers' Organisations	- 8 members
Universities and Colleges of Education	- 6 members
Ministry of Education	- 2 members

3. Divisions, units, sections etc. :

   An Executive Committee of 8 members :

   A Finance Committee of 5 members

   Panels, as required, for particular projects.

4. No participation in the training of teachers.

5. Staff :

Research :	1 full-time
Administration :	1 honorary
Clerical :	1 part-time

6. Budget in 1968 : £3,300

Education Committees	- 85%
Teachers' Organisations	- 12%
University and Colleges	- 3%

C. Major research projects completed in 1966 and 1967

C. 1. The relationship between the general adjustment of the primary school child and his relative attainment in language and number

Researcher : Miss J. Caldwell, B.A. now Dr. McQuoid.

Time spent on project : three years

Reference : An account of Dr. McQuoid's work will be published by the Council in late 1968.

Summary by author :

On account of the low standard of English and high standard of arithmetic usually found in Northern Ireland when compared with England, new normative data were obtained for a representative sample of 1284 Ulster children, aged between 9 and 10 years, on a battery of seven Schonell attainment tests. The new levels of attainment were superior to the original English norms on all the tests, except Silent reading, where the standard was similar.

Children from Urban schools were found to be superior on all tests to children from City and Rural schools. Children from 'voluntary' schools were superior to children from 'county' schools on tests of vocabulary and arithmetic. The only subject on which girls did less well than boys was problem arithmetic.

From this normative data a further 435 children were investigated to determine the exact relationship between personality adjustment, external factors and achievement, bearing in mind Lynn's (1957) findings of a disparity in attainment in favour of good reading in anxious children. Poor housing, large families, low socio-economic status, neglect, parental disinterest and friction were all found to be associated with maladjustment and low achievement in the children. Extremely highly extraverted and introverted children were superior on language, but traits like dominance, tough mindedness, gregariousness, complacency and ambition were associated with good performance on both language and number tests. In general maladjusted children and highly neurotic children were found to have significantly lower attainment than well-adjusted children, despite a similar level of intelligence. On the other hand, no evidence at all was found for associating anxiety, aggression or psychopathic tendencies with any kind of disparity in attainment.

D. Major projects in progress

D. 1. Early Learning Panel (representatives of infant teachers and educationists)

Stage I : Early Learning of Reading and Number/Mathematics in Primary Schools

Panel Convener : Professor Seth, Department of Psychology, Queen's University,

Starting date : January 1968

Probable completion date : Stage I, 1969.

Purpose and procedure :

To examine, initially by questionnaire means, current practice with regard to the early learning of reading and number/mathematics in the infant end of a 10% sample of Northern Ireland primary schools. The questionnaire was designed by study groups of serving teachers. It is designed to sample teacher practice in the basic subjects, teacher attitudes towards modification in method, and the influence on teachers' expectations in the classroom situation of the teacher's awareness of :

- sociological factors without the schools, and
- adequacy of provision within the school and classroom itself.

D. **2. Review Procedure Panel** (representatives of Local Education Committee Officers, heads of grammar and secondary schools and the Department of Education, Queen's University)

Panel Convener : Dr. J. McGilton

Starting date : January 1968

Completion date : 1968/1969

Purpose :

To examine the efficiency of the Review Procedure as a method of post 11+ selection for academic education in grammar schools.

Procedure :

A follow-up study of a complete form-group in all Northern Ireland grammar schools so that :

- those pupils selected by Review Procedure might be compared in their subsequent performance in G.C.E. 'O' levels, with pupils otherwise, or not, selected, and
- to compare variations in the Review Procedure application among types of secondary age pupils, i.e. those already at grammar school and those at secondary intermediate and unreorganised primary schools.

UNITED KINGDOM

SCOTLAND

PART I

GOVERNMENTAL ACTIVITIES

I. AGENCIES

Educational research in Scotland at national level is the responsibility of the **Scottish Education Department** which has its headquarters in St. Andrew's House, Edinburgh. In 1965 the Department set up a **Research Branch** to administer and manage its programme of grant-aided research. Since that date it has also set up a **Departmental Committee on Educational Research** and a **Joint Advisory Committee** on Educational Research - the latter in conjunction with the aim of stimulating research, suggesting priorities and vetting applications for research grants. The work of the Scottish Council is described in Part II.

The National Council for Educational Technology, the Committee on Research and Development in Modern Languages, the Centre for Information on Language Teaching and the Educational Research Board of the Social Science Research Council - see Part I of the note on research in England and Wales - operate on a U.K. basis and the Department is represented on them by members of Her Majesty's Inspectors of Schools.

II. FINANCE

The Department sets aside an amount in its annual estimates to cover grant-aided and sponsored research. The amount for 1968/69 is £60,500 from which is paid approximately £30,000 to the Scottish Council, and contributions to the total annual cost of the National Council for Educational Technology, the Committee on Research and Development in Modern Languages and the Centre for Information on Language Teaching.

The Scottish Council supports and commissions research projects from funds allocated by the Department, local authorities, teachers' organisations, etc.

III. CO-ORDINATION

Research projects commissioned or supported by the Department are co-ordinated by a Departmental Committee and a Joint Advisory Committee. The function of these committees is outlined in I above. Their members are drawn from the Department's administrative staff, Her Majesty's Inspectorate of Schools and the Scottish Council.

IV. INFORMATION

The Department publishes a list of completed and on-going research projects - including those sponsored by the Scottish Council - in its Annual Report. The Scottish Council also publishes an **Annual Report** and maintains a register of current and recently completed research, based on reports from universities, colleges of education (i.e. teacher training colleges), local research groups and persons undertaking research projects single-handed. The information in the register is not published except with the permission of the investigator concerned. The register enables the Council to inform an inquirer whether a topic is already being studied by another investigator.

The Department is kept informed, by means of interim and final reports, about research projects which it sponsors or grant-aids. It is also kept in touch with other projects by its representations on the various educational research bodies.

V. DISSEMINATION AND APPLICATION

The Annual Reports mentioned in IV are available to teachers. In addition, the Scottish Council publishes full accounts of its investigations together with shorter bulletins in which the results are presented in simple non-technical terms for the benefit of the practising teacher. The Council is currently considering the introduction of a Newsletter on research which would be circulated to, inter alia, serving teachers.

Individual teachers can, at their request, be supplied with non-confidential details of completed or on-going research projects.

Collaboration exists between the Department and teachers, administrators and researchers. This is achieved through contacts with the Scottish Council, universities, colleges of education, teachers' organisations and local authority associations.

NOTE ON FORESEEABLE DEVELOPMENTS

Following the recent establishment of bodies concerned with conducting educational research on a U.K. basis (e.g., the National Council for Educational Technology and the Educational Research Board of the Social Science Research Council) it is unlikely that the present structure of educational research in Scotland will be altered in any further significant manner in the foreseeable future.

PART II **ACTIVITIES OF EDUCATIONAL RESEARCH INSTITUTES**

Name of institute :	*THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION*
Address :	*46, Moray Place, Edinburgh 3*
Director :	*Dr. David A. Walker, OBE, M.A., M.Ed., Ph.D., F.R.S.E., F.E.I.S.*

A. Historical

1. Year of foundation : 1928.

2. The formation of the Scottish Council for Research in Education was due to the joint initiative of the Educational Institute of Scotland (the main organisation of teachers) and the Association of Directors of Education in Scotland.

3. The ground for such a proposal had been prepared not only by the formation of the Research Committee of the Institute in 1919 but also by the interest in research stimulated by the institution of degrees in education at Scottish universities in 1916.

B. Organisation and programme

1. The Scottish Council for Research in Education is an independent research institution financed mainly by contributions from the Scottish Education Department, the education authorities and the Educational Institute of Scotland.

2. The Council is itself the governing board. It is representative of the organisations in Scotland which have an interest in educational research. The membership of the Council includes representatives of the Association of County Councils, Association of Counties of Cities, the Educational Institute of Scotland, the Association of Directors of Education, the Universities, the Colleges of Education, the British Psychological Society (Scottish branch), the Association of School Medical Officers together with a number of co-opted members and assessors from the Scottish Education Department.

   At its meetings which are held twice in each year the Council considers reports on the progress of research carried out by the Council and approves new projects. It also makes grants to bodies or persons carrying out educational research in Scotland. Between the meetings of Council an Executive Committee carries out these functions.

3. There are no formal divisions etc.

4. The Research Council is not concerned with the training of teachers.

5. Size of staff :

	Full-time	Part-time
Total	7	2
Research	3	-
Administrative	1	-
Clerical	3	2

In addition, one full-time, one part-time officer and one full-time clerical assistant are engaged for the duration of particular projects.

6. Total budget :

1966/67	£35,900
1967/68	£39,000

Percentage contribution from sources of funds :

Government	74%
Education Authorities	12%
Teacher Organisations	5%
Foundations	4%
Publications etc.	5%

7. Main fields of activity :

The present policy of the Research Council is that it should concentrate its activities in four main fields :

(a) Secondary Education

(b) Examinations and Assessment

(c) Environment and

(d) Further Education.

The Research Council maintains a register of educational research being conducted in Scotland. This enables any individual researcher to contact the Research Council and be put in touch with others engaged in similar lines of inquiry.

Each year the Research Council publishes its annual report which includes summaries of the work carried out in various projects during the year.

C. Major research projects completed in 1966 and 1967

C. 1. Historical studies of education

The sixth volume in the series was published for the Research Council by the University of London Press in January 1968.

Publication No. 54 *Studies in the History of Scottish Education, 1872 - 1939.*
(Ed. T.R. Bone, M.A., M.Ed., Ph.D.)

Further volumes are in process of preparation.

It is the policy of the Scottish Council for Research in Education to undertake responsibility for the publication of histories of education. These histories have frequently been theses for higher degrees, which might not have been published but for the help of the Council.

The Council hopes that the material made available in this way will enable an authoritative and well-founded history of education in Scotland to be written at some future date.

C. 2. The Scottish mental surveys

Convener of Committee (1946 - 1955) :	Professor Sir Godfrey Thomson
Convener of Committee (1955 - 1959) :	Dr. N.T. Walker
Convener of Committee (1959 - 1962) :	Mr. D. Kennedy-Fraser
Convener of Committee (1962 - to date) :	Mr. J. Maxwell
Director of Council (1928 - 1958) :	Dr. R.R. Rusk
Director of Council (1958 - to date) :	Dr. D.A. Walker

The project covers the period from 1931 - 1967.

Reports published previously include :

The Trend of Scottish Intelligence, 1949

The Social Implication of the 1947 Mental Survey, 1953

Educational and Other Aspects of the 1947 Scottish Mental Survey, 1958

Eleven-Year-Olds Grow Up, 1958

The Level and Trend of National Intelligence, 1961

(The above are all published by the University of London Press).

The Intellectual Resemblance between Siblings by A.E.G. Pilliner and J. Maxwell, Annals of Human Genetics, London, 1960.

The final report on the Follow-up of the 1947 Scottish Survey is now in the press.

Procedure :

(a) In 1932 all available Scottish Children born in 1921 were given a group test of intelligence. A representative sample numbering 1,000 were also given an individual test.

(b) In 1947 the same group test was given to all children born in 1936. The purpose of this test was to estimate whether there had been any decline in average score over the interval between the tests.

(c) A sample of 1,200 children from the 1947 group were tested individually with the Binet-Simon test used in 1932. Home visitors visted or kept in touch with this sample annually until 1963, and information is available about the careers of 1,104. Psychologists using individual tests examined the 1,554 younger siblings of the sample members as each sibling reached the age of 11.

Results :

(a) The 1932 survey was the first national survey of intelligence of a complete year group.

(b) The 1947 survey showed convincingly the negative association between size of family and average intelligence but it also showed that the average score was higher in 1947 than in 1932. It pointed to the relationships which exist between the intelligence test score, the physical condition of the children and the socio-economic status of the child's home.

(c) The follow-up of the sample showed the relationships between test score and later progress, both scholastic and vocational.

C. 3. The Scottish standardisation of the Wechsler Intelligence Scale for children

Convener of Committee : Mr. J. Maxwell

Director of Council : Dr. D.A. Walker

Seven years 1960 - 1967

The Scottish Standardisation of the Wechsler Intelligence Scale for Children, Publication 55 of the Scottish Council for Research in Education, published by the University of London Press.

Procedure :

The Wechsler Intelligence Scale for Children was devised and standardised in the United States of America but has been extensively used in Scotland by psychologists. The terms used in some of the items are American in context and the norms are based on American children. It was therefore advisable to replace some of the items by others with a Scottish context and to prepare Scottish norms.

Amendment of the items was restricted to the minimum. The amended text was applied by psychologists to a carefully chosen sample of Scottish children ranging in age from five to fifteen. The responses were analysed and from them Scottish norms were created.

Results :

The revised norms were published by the Council in their *Manual for the Scottish Standardisation of the Wechsler Intelligence Scale for Children.*

The Wechsler Intelligence Scale for Children is now available in a form more suitable for Scottish children and with norms based on and applicable to Scottish children.

The Manual with revised norms is being used by educational psychologists in Scotland in their assessments of children.

C. 4. International inquiry into attainments in mathematics at different levels of secondary school

Convener of Committee : Dr. D.M. McIntosh

Director of the Council : Dr. D.A. Walker

6 years 1961 - 1967

International Study of Achievement in Mathematics : A Comparison of Twelve Countries (Editor T. Husén), J. Wiley & Sons, New York.

Procedure :

This inquiry was conducted in co-operation with the UNESCO Institute of Education in Hamburg and with centres of educational research in eleven other countries. Its purpose was to ascertain the outcome of mathematics teaching in these countries with their varying educational systems, in the hope that each of the participating countries would be able to learn something from the others.

Following an analysis of the objectives of mathematics teaching in each country, sets of tests were constructed to be applied to pupils at the age of thirteen, at the pre-university stage, and in some countries at about the age of sixteen when examinations corresponding to the "O" grade examinations of the Scottish Certificate of Education were taken. It is estimated that about 75,000 pupils in about 4,000 schools in the twelve countries attempted the test and responded to the questionnaires, which were administered in 1964.

The data were analysed on the computer in the Department of Education, University of Chicago, and the writing up of the hypotheses was done by an international team. The final editing was entrusted to a team of six of whom the Director of the Scottish Council was one.

Results :

The data have been analysed to show the variables associated with mathematics score. These variables have been classified under three heads :

(a) school organisation ;

(b) curriculum and instructional methods ; and

(c) social factors.

They indicate that while the best is equivalent in all countries, there are large differences among countries in the proportions of pupils reaching the pre-university stage and the standard in mathematics which they attain.

C. 5. The Scottish Scholastic Survey 1963

Chairman of Committee : Dr. J. Meiklejohn

Director of the Council : Dr. D.A. Walker

4 years 1963 - 1967

Rising Standards in Scottish Primary Schools : 1953 - 63, (in the press), Publication 56 of the Scottish Council for Research in Education, published by the University of London Press.

Procedure :

In 1953 the Council had conducted a survey of the attainments of the whole age group of ten-year-olds in Scotland in the subjects of English and Arithmetic. The aim of the 1963 Survey was to ascertain whether the standard of 1953 had been maintained or improved, and to find in which areas of these subjects changes in standard had occurred. The 1963 Survey was conducted on a sample basis, the sample being about six per cent of the age group. In addition to the statistical analysis of the scores, sex of pupil, size of school, subject matter area, and similar variables, practising teachers have analysed the responses to various items with a view to making recommendations on teaching methods.

The final version of the report is now in the press and will be published shortly by the University of London Press as publication 56 of the Scottish Council for Research in Education.

Results :

The survey has established that the performance of the 1963 ten-year-olds was markedly superior to that of the 1953 ten-year-olds in all four tests (mechanical arithmetic, arithmetical reasoning, English usage, English comprehension). The improvement was roughly equivalent to the progress made in six months by the average ten-year-old pupil.

D. Major research projects in progress or under consideration

D. 1. The 1932 Mental Survey Follow-up

Researchers : Mr. J. Maxwell, Convener of Committee ; Dr. D.A. Walker, Director of the Council ; Mr. G.J. Pollock, Deputy Director of the Council ; Mrs. S. Maxwell.

Starting date : 1966

Probable completion date : 1969

Purpose :

The 1932 survey was the first national survey of intelligence of a complete year group. One of the main points of interest in the follow-up is in differential fertility for intelligence.

Procedure :

In 1932 all available Scottish children born in 1921 were given a group test of intelligence. A representative sample numbering 1,000 were also given an individual test.

Arrangements have also been made to obtain current demographic information on the 1932 representative sample of 1,000. Marriage, births of offspring and deaths will be recorded.

D. 2. Permanence of learning of pupils at school-leaving age

Researchers : Dr. G. Reith, Convener of Committee; Dr. D. A. Walker, Director of the Council, Mr G. J. Pollock, Deputy Director of the Council

Starting date : 1966

Completion date : 1969

Purpose :

One of the reasons for undertaking the project was to investigate the complaints of some employers regarding the educational standards of young people entering industry from school. The results of the investigation should provide evidence for the justification or otherwise of these complaints. It will be possible to present a picture of the attainments of typical pupils at varying levels of ability.

Procedure :

The investigation was designed to assess the retention of basic skills in English and arithmetic by a group of young people who attained school leaving age in the summer of 1960. Some 3,600 school pupils from five areas of Scotland were tested in 1960 and as many as possible were retested in 1961 when the majority had entered employment. The opportunity was also taken to collect a considerable amount of sociological data about the group, e.g. father's occupation, present occupation of group, leisure activities, reading habits. Analyses of the attainments of the group on the basis of variables such as sex, course, father's occupation have been made.

D. 3. Preparation of a bibliography on Scottish Education

Researcher : Dr. J. Craigie, Convener of Committee

Starting date : 1961

Completion date : 1969

Purpose :

It will obviously be very helpful to future researchers in the history of education to have readily available a comprehensive and detailed list of references to works relating to Scottish education.

Procedure :

The aim is to prepare and publish a detailed and exhaustive Bibliography of works relating to education in Scotland published prior to 1916. At the present time there are only two bibliographies in print, one of which contains little material and the other covers only the period from 1916 - 1960. Sufficient material has now been gathered to enable a first volume to be published covering the period up to 1872. The work is continuing.

D. 4. Assessment for higher education

Researchers : Dr. D. A. Walker, Director of the Council; Mr. M. C. Killsross, Lecturer in Psychology, University of Edinburgh is the senior investigator.

Starting date : 1962

Completion date : 1969

Purpose :

It is hoped that results of the investigation will assist those responsible for the selection of students for entry to higher education and will throw light on the causes of failure where students have been unsuccessful.

Procedure :

This investigation is designed to ascertain what measures or combinations of measures best predict success at a Scottish university, College of Education or Central Institution. It involves a follow-up of the 11,000 young people who were presented for the first time in subjects at the Higher grade in the 1962 Scottish Certificate of Education examinations. Information obtained in 1962 and 1963 includes SCE examination marks, scholastic aptitude scores, head-teachers' assessments and sociological data. Periodical reports are obtained from the various institutions of higher education indicating the courses followed, examinations taken and general progress of the sample members.

D. 5. Handwriting in schools

Researchers : Dr. G.G. Neill Wright, formerly of Jordanhill College of Education, Dr. Helen Wright.

Starting date : 1960

Probable completion date : First report expected in 1969; second report at a later date.

Purpose :

The results of this inquiry will, it is hoped, provide a firmer foundation than has been available hitherto for constructing handwriting schemes and suggesting suitable tools and teaching methods for the various stages of the primary school.

Procedure :

Several new schemes of teaching handwriting in primary schools have been launched in recent years with little or no foundation in research in the basic questions which must be answered before any scheme can be soundly constructed. The researches which have been conducted by Dr. G.G. Neill Wright and Dr. Helen Wright have been aimed at supplying some of the necessary information.

One part of the investigation is historical, giving a history of western handwriting from its beginning down to the year 1900, and dealing with writing materials and teaching methods. The volume dealing with this part of the inquiry is nearing completion.

The second part is experimental, dealing with modern writing tools and with methods of speeding up writing. The results will furnish the material for a second volume.

D. 6. Age of transfer to secondary education

Researchers : Professor J.D. Nisbet, Department of Education, University of Aberdeen, Mr. N.J. Entwistle, Research Assistant

Starting date : 1963

Completion date : 1968/69

Purpose :

The project will provide a firm basis of information about the impact of adolescence and of transfer under the present system.

Procedure :

The project is a longitudinal investigation into the intellectual and psychological development of an age-group of Aberdeen school children. Information on the children has been recorded from the age of 7 onwards, and the study is following the children throughout the period of transfer into the first year of secondary school. The predictive validity of selection batteries at age 11 and age 12 will be examined, together with various assessments of attitudes, interest and aspirations, home background, physical development, and adjustment to secondary school.

The sample was defined in March 1964 as comprising all children in the City of Aberdeen who were to be transferred to secondary schools or departments in 1965. The initial battery tests were administered in March 1964.

The study is designed to provide direct evidence on the optimum age of transfer. The findings should also indicate the special areas of difficulty in the existing transfer arrangements and should suggest methods of resolving these difficulties.

D. 7. Modern languages in the primary school

Researchers : Mr. W. Cunningham, H.M.I., Convener of Committee; Dr. D.A. Walker, Director of of the Council; Mr. G.J. Pollock, Deputy Director of the Council

Starting date : 1964

Probable completion date : 1972

Purpose :

It is hoped that the results of the investigation will provide valuable information on methods of teaching French in the primary school stage, optimum age of starting, and consequences in the secondary school.

Procedure :

This investigation arose from the introduction of a modern language into the curriculum of many primary schools in Scotland. Since the methods used are predominantly oral and the language favoured is French, the Committee undertaking the inquiry began by devising tests

(a) of aural comprehension and

(b) of oral proficiency.

When arrangements were made to try out these tests, it was found that conditions in schools were so fluid that suitable groups of pupils could not readily be found. It has been decided that the more protracted and difficult method of controlled experiment should be used. This will be confined to areas having advisers on modern languages.

The aim of the project will be to ascertain to what extent the objectives of modern language teaching in the primary school are being achieved.

Since the new IEA investigation will also cover the teaching of French in primary schools it has been agreed that attempts should be made to link the two projects together.

D. 8. The growth of children's capacity for rigorous thinking

Researchers : Dr. Margaret Donaldson, Lecturer in Psychology, University of Edinburgh
Miss H. Strang, Research Assistant

Starting date : 1965

Probable completion date : 1968/69.

Purpose :

The study is not directly concerned with the learning of school subjects. However, much of the work which children are asked to undertake in school demands the kind of control in formal thinking with which this investigation is concerned, particularly so in the case of mathematics and science. Any increase of understanding of how children come to be able to observe the conditions of a formal problem must evidently have bearing on attempts to teach these subjects efficiently.

Procedure :

This research is concerned with the growth of the ability to deal with formal problems. Tasks are devised in which the child is given preliminary instructions requiring him to ignore any subsequent instructions from the experimentor unless a certain condition obtains. The child has therefore to exercise a large measure of self-control in order to inhibit responses whenever the condition is not satisfied. This work will be extended in an effort to discover what variations can be introduced to make tasks of this kind easier or harder, so that the nature of the processes involved may be better understood; and also to see whether the children can be trained to carry out the tasks more successfully. Special attention will be paid to the role of language and to the possibility of finding means of helping the child to use language as a more effective instrument of control. The work will be carried out with children between the ages of 5 and 12.

D. 9. Factors determining choice of school course and subsequent career

Researchers : Dr. H.J. Butcher (now Professor Butcher), Department of Education, Manchester University; Mr. H.B. Pont, now Research Assistant, Department of Education, Manchester University

Starting date : 1965

Completion date : 1968/69

Purpose :

The Robbins Committee has emphasised the need for a radical expansion and development of British scientific and technological education. It is important therefore to find out the reasons for the lack of applicants to fill the existing places in science and technology at some Universities.

Procedure :

This is an investigation into the reasons for a shortage of candidates for science and technology places at some Universities. The main study is concerned with second-year pupils in secondary schools in 1965, and particularly those who are most likely to go on to the Universities of Edinburgh and Heriot Watt. Over 1,000 pupils from twenty schools are being followed-up. Information is being obtained about :

(a) the schools, etc.,

(b) school policy regarding specialisation in science and allied topics,

(c) the individual pupils; e.g. school marks, aptitudes, interests and personality.

The parents of 150 - 200 of these pupils have been interviewed about their attitudes to their children's choice of subjects and future career.

A second survey has been carried out by questionnaires among 300 first and third year students at Edinburgh University in the faculties of Arts, Science and Social Science. Information has been obtained on reasons for subject choice, information available at school, career expectations etc.

From the data available it is hoped :

(a) to produce an estimate of each pupil's most likely direction of specialisation,

(b) to compare schools on the basis of their relative favourability to the production of scientists,

(c) to make a special study of the science subjects taken by girls and assess the wastage of potential women scientists.

D. 10. Examinations

Researchers : Dr. D.A. Walker, Director of the Council; Mr. G.J. Pollock, Deputy Director of the Council

Starting date : 1966

Probable completion date : Not yet fixed

Procedure :

A working committee of four has been set up to direct and co-ordinate the project. It was agreed by the Council that the committee should first collect and collate data available from other inquiries in Scotland before deciding the particular investigation to be undertaken by the Council.

A review of the work being undertaken in the field of examinations in Scotland and elsewhere has been completed and possible research projects are under consideration.

D. 11. Environmental determinants in slow speech development

Researcher : Mrs. L.J. Ferrier, Department of General Linguistics, University of Edinburgh.

Starting date : 1967

Probable completion date : 1968/69

Purpose :

It is hoped that the study will contribute to current educational theory on the subject of supplementing the environment of "disadvantaged" children.

Procedure :

This project is a pilot study into the environmental determinants of slow speech developments.

An experimental situation has been set up, using "disadvantaged" nursery school children, to test the relative effects of two training techniques designed to supplement the "primary linguistic data" available to these children. A battery of tests will be given before and after the training period, to measure the acceleration in the two experimental groups, relative to each other and to a matched control group.

D. Education by appointment

Researchers : Dr. D.A.Walker, Director of the Council; Mr. G.J. Pollock, Deputy Director of the Council; Mr. J. Foster, Napier Technical College

Starting date : 1967

Probable completion date 1968/69

Purpose :

The work in the first year will be exploratory and only then will it be possible to plan a definite project.

Procedure :

Education by appointment is a technique whereby students make appointments and attend at times suitable to themselves for instruction by teaching machines and other programmed learning material. A pilot scheme of this type is to be inaugurated in Napier College in September 1967 and will provide an opportunity to evaluate and possibly compare the effectiveness of the various aids employed.

D. 13. Wastage in national certificate courses

Researchers : Mr. G. J. Pollock, Deputy Director of the Council; Dr. D. A. Walker, Director of the Council, will be available for consultation

Starting date : 1966

Probable completion date : 1970

Purpose :

The present failure rate in National Certificate courses is approximately 75%. The information obtained from the project should throw light on some of the reasons for this extremely high failure rate.

Procedure :

The factors affecting wastage in National Certificate courses will be investigated. It is proposed to follow up a sample of approximately 1,500 students who enrol in day release classes in the 01 year of the National Certificate Courses in August 1966. The follow up will cover a period of three years. Data will be obtained on the aptitudes, attainments, personality characteristics, vocational interests, attitudes and aspirations of the sample. Correlates between the data and success or failure in National Certificate Courses will be investigated.

D. 14. Computer procedure for school timetables

Researchers : Mr N.L. Lawrie, Lecturer, Department of Administration, University of Strathclyde; Miss S.J. Turner, Research Assistant.

Starting date : 1966

Probable completion date : 1968/69.

Purpose :

The development of a successful programme would be beneficial to many schools. Because more alternatives can be examined by computer, the procedure may lead to better timetables and better use of resources.

The objective of the research is to devise a computer procedure for constructing school timetables which would be suitable for most secondary schools in Scotland, which would be economical to run and which would provide as good a timetable as can be obtained by hand methods.

Procedure :

A detailed investigation of timetabling problems in a number of schools will be made.

The aim will be to find what difficulties are associated with putting data from schools in a form suitable for linear programming. It is proposed to develop a two-stage procedure, and to compile programmes to implement this procedure.

D. 15. International Project for the evaluation of educational achievement; Phase II

Researchers : Dr. D. A Walker, Director of the Council; Mr. G. J. Pollock, Deputy Director of the Council; Mr. J. L. Powell, Assistant Director of the Council.

Starting date : 1966

Probable completion date : 1968/69

Purpose :

The final results will be of assistance to those engaged in teaching the subjects concerned. Even at the first stage the listing of objectives, analysis of contents of syllabi and construction of measuring instruments have been found to be profitable exercises for teachers.

Procedure :

Following the completion of the project on the teaching of mathematics reported in two volumes entitled *International Study of Achievement in Mathematics : A Comparison of Twelve Countries* (ed. T. Husén, 1967) the International Council embarked on similar projects covering other subjects and the Scottish Council has agreed to co-operate in three, i.e. Science, Reading Comprehension and French as a foreign language. The first stage of the new phase includes the listing of objectives and construction of items for tests which will assess the degree of success in reaching these objectives. The second stage which is being treated as a separate project involves the application of the tests, the evaluation of the results and the publication of the findings.

Research centres in the participating countries co-operate with each other and with the UNESCO Institute for Education, Hamburg, where the international secretariat is housed.

D. 16. Selection in secondary and higher education and the recruitment of teachers in Scotland

Researcher : Mr. A.F. McPherson, Department of Politics, University of Glasgow

Starting date : 1966

Probable completion date : 1969

Purpose :

The findings should throw light on the social determinants of educational and occupational choice and should help to place the analysis of recruitment to teaching in the broader context of educational and social selection as a whole.

The purpose of the research is to establish the level of scholastic ability and educational attainment of recruits to the teaching profession in relation to the total pool of such ability and attainment available in

(a) the fifth year of secondary school; and

(b) the final year of university.

A second purpose is to examine the relationship between ability, attainment and aspiration at successive stages of the career and that between attainment and final choice of occupation, in the light of factors such as social mobility, educational level of parents and siblings.

Procedure :

Use will be made of the considerable amount of data collected by the Council in its project on assessment for higher education. (AHE). Additional data will be obtained from the students by postal questionnaires, from the records of Glasgow University, from the study of children born in Scotland in the first week of March 1946 (Medical Research Council investigation) and from Register House material (birth certificates).

Arrangements have been made for linking the punched cards for this inquiry with those already available from the Council's AHE investigation. Processing will be on the Glasgow KDF 9 Computer.

D. 17. The Teaching of Chemistry in Universities

Researchers : Dr. D.E. Hoare, Senior Lecturer in Physical Chemistry, University of Dundee, Miss M. Revans, Research Assistant

Starting date : 1967

Probable completion date : 1970

Purpose :

The overall aim of the project is the improvement of the teaching of chemistry in universities, particularly in the first year of the courses where failures are most frequent.

Procedure :

This research project is co-ordinated by a committee containing representatives of the 8 university chemistry departments in Scotland.

The project has three main phases :

(1) The collection of information about curricula and methods of teaching;

(2) An assessment of student and staff attitudes;

(3) An experimental and comparative evaluation of certain teaching and examining methods (e.g. programmed learning and objective examinations of the multiple choice type.)

D. 18. The relationship between parent, school and child in the primary school and its effect on the child's attainment

Researchers : Mr. P. Vincent and Mr. J.P. Struthers, Lecturers in Sociology, University of Strathclyde ; One research worker to be appointed

Starting date : 1968

Probable completion date : 1971

Purpose :

The project should yield information on the types of stresses and strains between home and school and may indicate ways in which the link between home and school should be strengthened in the interests of the child.

Procedure :

The Research Council has asked the Sociology Department of Strathclyde University to carry out this project with the aid of a grant from the Council.

The details of the research plan have still to be finalised.

D. 19. Courses for craftsmen

Researchers : Mr. R.B. Forbes, Convener of Committee; Mr. A.D. Weir, Research Officer; Dr. D.A. Walker, Director of the Council; and Mr. G.J. Pollock, Deputy Director of the Council available for consultation

Starting date : 1967

Probable completion date ; 1969

Purpose :

The pattern of further education courses is changing rapidly and a knowledge of the attitudes of students, staff and employers towards the existing courses would be helpful in any future developments.

Procedure :

The aim of the present investigation is to ascertain :

(a) what are the present objectives accepted by students in craft courses of further education and what the students consider ought to be the objectives;

(b) what they regard as the present incentives and disincentives to learning in these courses, and what they consider ought to be the incentives.

The project has been restricted to some 500 students in the main craft courses in two large technical colleges and the information is being obtained mainly by the use of structured interviews.

D. 20. School achievement of children with slow speech development

Researchers : Dr. T.T.S. Ingram, Senior Lecturer in Paediatric Neurology, Department of Child Life and Health, Edinburgh University; Mrs. Anne Mason, Senior Research Psychologist; Mrs. Mary McIsaac, Research Statistician

Starting date : 1967

Probable completion date : 1970

Purpose :

Previous research studies have shown that slow speech maturation in otherwise healthy and intelligent children is often associated with late difficulties in learning to read and spell. Studies of this relationship have been unsatisfactory however because valid measures of speech development have not been available and the investigations of reading difficulties have been retrospective. Valid measures of linguistic and phonetic maturation are now available and will be used in this investigation.

Procedure :

The aim of the project is to investigate the incidence of under-achievement in reading, writing and arithmetic among young children with slow speech development. The speech development of 82 healthy intelligent children with slow speech maturation and of 138 controls has been assessed quantitatively between 1961 and 1967. It is proposed to measure their attainments in arithmetic, reading, writing and spelling in their early school years and relate these to the rate of linguistic and phonetic maturation.

D. 21. Social and educational determinants of job choice

Researchers : Dr. P.W. Musgrave, Lecturer in Sociology, University of Aberdeen, Miss J. Dealtry, Research Officer

Starting date : 1967

Probable completion date : 1971

Purpose :

The results of the investigation should be of relevance to teachers, members of the youth employment service, and others engaged in advising young people on choice of occupation.

The aim of this project is to investigate the process of occupational choice and the way in which young people settle into work. The part played by various institutions of further education in this process will also be studied.

Procedure :

Data will be collected in Aberdeen in schools, at entry to the labour force, in the work situation and in establishments of further education. Advantage will be taken of an existing very large longitudinal sample on which much information has already been gathered.

D. 22. Non-intellective factors in secondary school success

Researcher : Mr. A. Milne, Principal Lecturer in Educational Psychology, Dundee College of Education

Starting date : 1967

Probable completion date : 1970

Purpose :

The results of the investigation should provide useful information on the importance of non-intellective variables in relation to school success.

Procedure :

This project arose as a consequence of the investigation of those pupils who took "O" grade examinations in 1966 although originally allocated to non-certificate courses.

It is intended to follow-up a sample of approximately 7,500 pupils originally in the second year of their secondary courses. The performance of these pupils throughout their remaining school career will be studied and their final school achievements correlated with various variables such as personality, home and school backgrounds.

D. 23. Sociological factors associated with irregular school attendance among secondary school children

Researchers : Dr. S. Mitchell, Lecturer in Sociology, University of Stirling; one research worker not yet appointed

Starting date : 1968

Probable completion date : 1970

Purpose :

Previous studies of irregular school attendances have tended to limit themselves to the most extreme manifestations of the problem - school phobia and prolonged truancy. The present investigation is more extensive and examines the distribution of absence in general. The aim of the project is to study the environmental and personal factors associated with voluntary absence from school.

Procedure :

In addition to a large-scale statistical inquiry into the distribution of absence from school by cause and duration it is proposed to carry out a more detailed investigation of selected groups of poor attenders. Information will be obtained on the sociological background of the children and on the attitudes of the children and their parents towards the school environment and the educational system in general.

D. 24. Organisation of secondary courses

Researchers : Sir James J. Robertson, Convener of the Committee; Dr. D.A. Walker, Director of the Council; Mr. G.J. Pollock, Deputy Director of the Council; Mr. J.L. Powell Assistant Director of the Council

Starting date : 1965

Probable completion date : 1968/69

Purpose :

The results of the investigation should throw some light on factors influencing the achievements of lower ability pupils in secondary schools. The execution of the project will provide valuable experience regarding the problems involved in setting up local research groups to carry out projects with assistance from Council staff.

The aim of the investigation is two-fold :

(a) to study (1) the factors which have influenced pupils taking "O" grade examinations in 1966 in their choice of subjects ;
    (2) the times at which choices are made ;
    (3) the effects of these choices on their subsequent progress ;

(b) to study the backgrounds of those pupils in the sample who were originally allocated to non-certificate courses, with a view to ascertaining the factors which differentiated them from pupils of similar attainments who did not attempt the "O" grade examinations.

Procedure :

In view of the current changes in the organisation of secondary schools it was decided to proceed with part (b) of the original investigation only and this on a local rather than a national basis. Information from five education authority areas was obtained about pupils deemed at the outset of their secondary schooling to be under average in ability but who took Scottish Certificate of Education "O" grade examinations in 1966. In some of the areas, groups of college of education lecturers, headmasters and teachers were formed to collate the data and to write reports.

A report on the project is being prepared.